

A NOVEL OF THE FUTURE COMPLETE IN THIS ISSUE!

# STARTLING STORIES

15¢

FALL  
ISSUE

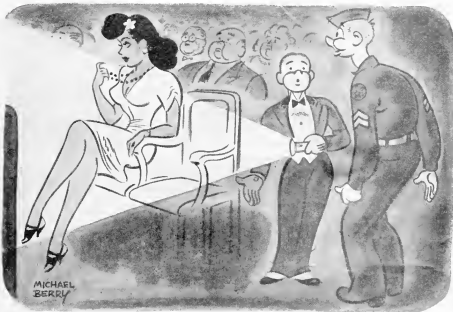
A THRILLING  
PUBLICATION

*Aftermath*  
An Amazing Complete Novel  
By JOHN RUSSELL FEARN

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A Hall of Fame Classic  
By FRANCIS FLAGG

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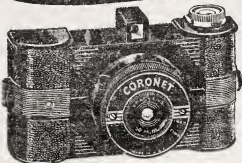
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Our new attractive and easy-to-read space-saving type  
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Vol. 12, No. 3

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Fall, 1945

A Complete Novel of the Future



## AFTERMATH

By

JOHN RUSSELL FEARN

*When the laws of evolution go mad and the world  
is in grim peril of total chaos, Lincoln Bax and a  
brave band of human survivors battle against forces  
beyond man's understanding! .....*

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## THE ETHER VIBRATES

(Continued from page 6)

devices to avoid being caught in the center of any two-front controversy.

Froggy, get out the two-way atom blaster just in case and have it loaded to discharge its continuous explosive charges in both directions. Just in case, Froggy, and when you finish, bring on more Xeno.

Speaking of Gabriel, he is also among those present as follows:

## A HORN BLOWS IN BROOKLYN

By Howard Gabriel

Dear Sarge: Unbelievable but true—a swell cover on the latest SS. It makes up double for the monotony of the issue before. You know, Sarge, the one that shows you wrestling with Grag.

I was shocked beyond amazement when I saw my letter printed. So I am giving you the honor of printing this one. To make sure you print it, I am dipping each sheet in a vat of Xeno Juice.

The illustrations for the stories rate as follows—

1. THE HOLLOW WORLD—The only decent pic on page 15.

2. THE RED DIMENSION—Yaaaaah. Marchioni. Let him stick to joke books.

3. FATAL THOUGHTS—Marchioni again—Oh, well, this one wasn't so bad.

This latest issue lacked punch, and the stories were definitely not so hot.

Sorry, Sarge. I meant to send you a drawing of yourself with this letter. I was copying it from a label, but my sister hid the iodine bottle—1450 East 19th Street, Brooklyn, New York.

A plague on you and your bootleg Xeno juice, Gabby. The sadly cut Terrean variety of this priceless elixir is far lower in standard than the Plutonian dew stashed in ye Sarge's vats. As for your iodine label cartoon, ye Sarge is susceptible only to the sort with double-cross bones. Long experience has rendered him immune. And let's leave your sister out of this. Faah!

## GABE'S NEIGHB HAS HIS SAY

By Robert Davidson

Dear Sarge: I have just read the latest SS from stem to stern, and the stem (meaning the cover) was purtier than the one for the Spring ish. Compliment Earle K. Bergey for me, for the flashy rocket ship. It was the first one since PIRATES OF THE TIME TRAIL. Oh yes—THE GIANT ATOM had the inside of one, but that doesn't count.

The stories were all super-duper, with THE RED DIMENSION taking first place, THE HOLLOW WORLD just sliding into second ahead of FATAL THOUGHTS. By the way, FATAL THOUGHTS was one of the few good shorts I have ever read. I have read just one of the John Carstairs stories besides this one. That was SNAPDRAGON.

THE ETHER VIBRATES and MEET THE AUTHOR are swell features. Best letters this ish were by Joe Kennedy, Bob Bradford, Benson Perry, the Circle of Ten (huuh!), Jerry Mandell, Al Yeager Jr. and E. E. Greenleaf Jr. What happened to Chad Oliver, my favorite letter hack and the other Joe Kennedy?

(Continued on page 84)

Just out—the August issue of the new pocket-size MYSTERY BOOK Magazine featuring the newest mystery novel by Hugh Pentecost, also Cornell Woolrich, Will Cuppy and others. Get it today, 25c at all newsstands.

(Ads)

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—J. A. Carter, 1205 Green Ave., Green, Texas.

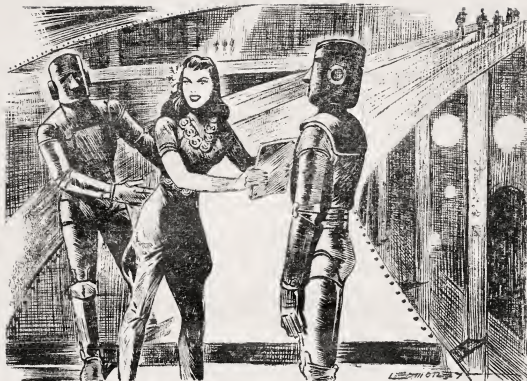
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Another robot went clanking past Freida

# AFTERMATH

By JOHN RUSSELL FEARN

*When the laws of evolution go mad and the world is in grim peril of total chaos, Lincoln Bax and a brave band of human survivors battle against forces beyond man's understanding!*

## CHAPTER I

### *The Change*

**T**HE DEVOURING flame of war, kindled first in 1939, seemed inextinguishable. Sweeping first across Poland, then back over Europe itself to engulf the whole continent in ruin and destruction, it was not long before it assumed global dimensions with every nation sacrificed on its evil altar. Gradually, however, defense gave

way to aggression and onslaught. The tables were turned, and towards the end of 1944 there was real promise of victory. Then Klenheiner of Europe discovered the fearful power of atomic force. Far from the struggle being ended, it was clear it would be indefinitely prolonged.

Through 1944—1947—1949, an endless procession of filthy, disastrous years, mad mankind played with the new and unthinkably violent toy. By 1952 the war had shifted from the military to the scientific field. The

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# Disaster Stalks When the Earth's Heavieside

death ray, long said to be a myth, had been born. Atomic force too was used now for every conceivable method of destruction. the quickest way to kill a fellow man.

The object of the war? What did that matter? It had once been some sort of effort to curb the spirit of aggression. Now in 1952 it did not signify. The only thing to do was to go on destroying without mercy until somebody said stop.

The time to stop was not yet. In every part of the world there was the same satanic vision of atomic-force bombers cleaving red-hued heavens, of pencils of orange flame sweeping the low hanging smoke clouds. The air everywhere was filled with the stench of burning wood and rotting bodies. Now and again across the higher reaches there burst titanic stratosphere shells, blazing through the atmosphere's topmost heights and raining destruction on the groaning, struggling millions drifting homeless below. Security was a thing unknown, something swallowed up in the maw of the canon.

The United States, Europe, the British Commonwealth, the Orient, European Asia—all worshipped at the juggernaut wheels of the war god. In his vicious retinue were the usual ghouls of famine, injury and plague.

Then suddenly it was over! As though an order from Providence had been given, all fighting ceased.

Commander Lincoln Bax could not understand it. He was practically the last military leader of the democratic forces and had been prepared to go on fighting to the death. Oh, what was the use of it all, anyway? On this particular summer morning in 1952 he could not figure himself out, either. It was as though something had happened to him during the night. It made him think. It made him pull his untrimmed beard and rub his tumbled mane of black hair in mystification. . . .

**J**UST now, standing vignettied in the sunshine in the crude doorway of his dugout, he epitomized the lineage of pioneers from which he had sprung. Westerners they had been, hard hitters and hard fighters, men and women who had given their all to create the United States which he had seen crash in flame and ruin.

"No, I don't understand it," he muttered. "War and destruction of the enemy have suddenly ceased to interest me. And after all the plans I'd laid!"

He turned back into the dugout and sat for a long time in thought. He was alone in

this makeshift headquarters, surrounded by his operational maps and radio-television apparatus. The map now meant nothing to him, and the radio-television had become worthless. There hadn't been much use of giving orders recently in any case—soldiers were few and officers scarce. But at least such activities had enabled him to keep in touch with his comrades engaged in the struggle—Dr. Jan Eberhart for instance, the front line scientist whose fertile brain had supplied so many devastating weapons.

Bax smiled as he thought of the number of talks he had had with Eberhart over the radio, to pass away the time—or the games of chess they had played, watching each others' moves in the televizor-screens. Eberhart had suggested the idea. A good chess player is often a brilliant military commander.

And now? His perplexity became so great that Bax could no longer ignore it. He shook himself like a St. Bernard, got up, and went outside. There were no sounds of gunfire or bombing—no sound of anything save the trills of a soaring lark, carrying the silver thread of its song into the blue morning heaven. Bax listened to it, and wondered why it fascinated him. Then with a cold shock he realized it had been fifteen years or so since he had heard a sound like this.

But it was puzzling—very puzzling. He felt the need to contact others and see if they felt the way he did. Returning inside to the radio, he signaled Dr. Jan Eberhart.

After a while the scientist's face merged onto the televizor screen—a square, dogged face slanted with a habitually cynical smile. Gray hair tumbled back from a clifflike forehead. Gray eyes peered steadily from under bushy brows.

"Hallo, Bax!" he greeted the commander. "What's happened to that war we were fighting?"

"I was just going to ask you the same thing. I don't understand what's gone wrong with everything. Or with me."

"You?" Eberhart's eyes became searching. "You look in pretty good shape."

"Physically, perhaps. In fact I don't think I ever felt better. But I'm confused. It's rather like looking at life from several different angles at once and trying to understand what each angle means—" Bax broke off and grinned. "Fancy me, a hard bitten commander, actually getting a kick out of listening to the song of a lark!"

Eberhart was silent for a moment, then spoke in a quiet voice.

"I've just solved the cosmic calculus."



# Layer is Destroyed by the Holocaust of War!

"I'm no scientist, but I suppose that means something?"

"I'll say! It means I'm just about five times as intelligent as I thought I was."

Bax sighed. "Well, we can't just sit here like gods on a mudheap and talk of high things. What has gone wrong? From the lack of noise I'm wondering if everybody is dead."

"Not dead," Eberhart said. "This morning, when I saw how quiet things were, I had Squadron Leader Cranley make a reconnaissance. He reports that the opposing factions are roaming about the battlefields,



Freida Manhoff

chatting to each other! Through his radio he got snatches of conversation—and you'd think it was the Garden of Eden!"

Eberhart's cynical grin spread.

"Think of it!" he went on. "Warriors talking of the glory of life, never once swearing, looking forward to the friendships to come! There's another thing, too. Freida Manhoff, my technical assistant, has been giving a hand at a field hospital. She tells me that a lot of the patients recovered in the night. And war? It just doesn't exist any more, Bax. It's gone from the mind of man like mist before the sun."

"Perhaps God himself ordained it," Bax whispered. Then, puzzled, he rubbed his maned head. "But we can't leave things in this state, Eberhart. I must lead the people to a worthwhile future, even as I was going to lead them to victory."

**E**BERHART took the assumption of leadership in silence at first.

"You'll call a peace conference of the various powers?" he said, at last.

"Definitely! I'll get into touch with the radio stations and send out a call. Even if we don't know the reason for peace, we can at least take advantage of it."

Neither Bax nor Eberhart were alone in their strange metamorphosis. Throughout the world there had been a stirring and shifting of mental outlook which had started the night Bax had sensed the change.

The men and women drifting about the desolated world, either homeless or at the best installed in drafty hovels, could not help but notice an inexplicable change in their ideas. To every person in life there remains some problem which cannot be solved, sometimes pushed into the subconscious. It was such personal problems as these which suddenly found solution. The general urge now was to hunt for security first and then examine the problem at leisure. One thing was certain—emotions were uplifted. Fear, horror, degeneracy, immorality, all the foul offshoots of war, had weakened amazingly.

The Peace Conference Bax had suggested over the radio was a briefer affair than the world had anticipated—brief because war seemed a useless product of a dark age. A new era had dawned on man and he was in a hurry to take advantage of it.

The Conference itself took place in the ruins of a one time famous administration office in a now nameless place, and it was the bearded, still vaguely puzzled Lincoln Bax who dominated the proceedings. He acted as if he were inspired. Though quite unscientific, there was a wisdom and idealism about his plans which completely carried the gathering.

To the left of him at the table sat Eberhart, silent but attentive, and next to him were Bruce Cranley—thirty-five, dark-haired, and clearly a man of action—and blond-headed, eager Freida Manhoff.

"We are going to build—Utopia," Bax at length announced. There was a momentary silence.

"You can't build a new world purely on idealism, much as I respect that point of view," Eberhart said. "It needs money, power, hard driving, and above all science. I'll build a new world quick enough, but not an idealistic flower garden!"

Bax smiled. "You misunderstand me. I propose that we create in this country a land such as the world has never known—a country of giant cities, streamlined, scientific, hygienic, using every amenity of science.

This war has brought the deeper secrets of science to the top. Atomic power! Solar control! We must use them to help mankind."

Bruce Cranley made an observation. "What you are planning, sir, will require three things—organization, science, and a profound knowledge of mass psychology. And you'll need an army of experts to help you."

"What is to prevent me having them?" Bax asked.

"You can have them!" Freida Manhoff declared. "Nobody would refuse. And you, Dr. Eberhart, with your great scientific knowledge, will be able to accomplish so much."

He looked at her eager young face, the quick blue eyes. Then he shrugged and turned his attention back to Bax.

"Very well, Bax, I'll lend a hand. I admit though that I had rather thought that a scientist should lead the people. Since it has turned out this way I am willing to abide by the general decision."

"My very good friend!" Bax said earnestly, and looked around at the others. "It is agreed then that we—of every country here represented—try to make the whole world a Utopia?"

There was a general nodding of heads.

"Agreed!"

## CHAPTER II

### *Capital City*

**B**AX'S first act was to summon to his side all the leading scientific, engineering, agricultural, and architectural experts, issuing orders for other countries to keep a check on each of his proclamations and follow them out identically.

To Bax belonged the welfare of the people—to Eberhart the scientific planning. Between them they got the work under way. Populations were conscripted in every country for manual labor. They set about removing the signs of carnage and laying the foundations of a new world empire. Christmas, 1952, started the busy clangor of giant machines on their new tasks. New blast furnaces smelted endless tons of scrap metal. Tractors driven by atomic power plowed up the land. Submarine dredgers cleared the oceans of foundered craft and retrieved vast quantities of sunken treasure.

Scientists worked as never before, and through the combined efforts of Bax and Eberhart the technicians were provided with a program. Amongst other things Bax discovered transite. It was definitely Element 93—clear as glass, durable as gold, extremely

heavy, and forming the basic metal from which the cities were to be built. The idea for it—for Bax was no scientist—had come right out of nowhere, and proved to be ideal as a material. It made Eberhart think a good deal, and on none too cordial lines either. He felt a march had been stolen on him.

Bax did not keep the secret to himself either—again much to the annoyance of Eberhart. He gave it freely to other countries and so, as the Capital City grew on the site of the old New York the key cities in all parts of Earth grew too. Under tropic suns, in far distant Northern climes, in the temperate zones, slender towers of glittering transite began to reach to the clouds.

Towards the middle of 1953 the great dream began to be realized. Months of unceasing work and all the forces of science brought about Bax's idealistic vision.

Capital City was a masterpiece, a giant edition of all the sister cities gracing the world. It was made up of immense blocks of buildings with two-thousand foot high facades. On top of these, lofty skeleton towers spiked heavenward, used for radio beams, atmospheric observations, power radiation, and a hundred and one devices. The cool open spaces on surface level were for the pleasure of the populace, a triumph of the landscape gardener's art.

On special runways silent traffic skimmed along and foolproof locking systems prevented all chance of accident. Pedestrian ways below, even though perched five hundred feet from the ground, were barred to traffic and each way was connected with a ground elevator, robot controlled.

Really the city was a titanic automat. Mighty power rooms, absorbing the energy of the sun, provided much of the city's huge current consumption while subsidiary engines used atomic power, as did all the vehicular and air traffic. To the west of the city, using tidal energy, were the engines of weather control by which the eternal vagaries of Nature were forever mastered.

Utopia, in the name of Capital City, had come. Envisioned by Bax, the science of Eberhart had made it possible. Bax was exultant, but Eberhart was non-committal. It was plain that he was thinking all this paradise should be his alone, even as its magnificent science was the product of his brilliant brain. . . .

Once the problem of the city's creation was off his mind and his other organizations were working smoothly, Dr. Eberhart went back to the struggle of finding the reason for the extraordinary change in world thought. Being a skilled scientist in any case, and gifted now with a far greater intelligence



The operator sent a messenger to summon Bax

than he had ever possessed before, he rightly wanted to know what had given Bax the revered qualities of a god, and himself the mentality of a super-Einstein.

Freida Manhoff, working at his side, had no exact idea of what he was driving at. She followed out his orders obediently every day, but he saw to it that she had little opportunity to watch his research. Most of the time he kept her busy ministering to the city's scientific needs, all of which were controlled by the Eberhart Organization.

What glimpses she had had of him at work had revealed him absorbed in analyses of poisons and explosives from the war, or else studying spectroheliographs of the heavens. Then, on another occasion, he had spent a whole morning showing books and colored flags to a variety of dogs of all breeds!

**I**T WAS odd all right, but Frieda valued her job too much to allow any hint of Eberhart's activities to become gossip in the city. In fact the only one she confided in at all was Bruce Cranley.

Much to her surprise she found him sitting in her private office when she arrived at work one morning.

"Why, Bruce!" She came forward eagerly, hands extended. "You're a long way from your airfield, aren't you?"

He grinned. "Worth it to be near you."

"But Bruce, we agreed. There were to be no meetings during business hours. It's against regulations for both of us."

He laughed outright at her serious expression, cupped her slender hands in his big fists.

"I was summoned here, sweetheart. Old Eberhart wants me—though I can't think why. For ten-thirty," he added, glancing at the chronometer. "Wonder if he's likely to be long?"

The girl shrugged. "Last I saw of him he was nosing over a lot of spectroheliographs. He's going to solve the reason for the Change even if it kills him."

"The Change was a bit queer at that," Bruce admitted, thinking. "Still, it makes no difference to us in any case."

Freida looked at him steadily. It was such an odd look it made him frown. Then she drew up a chair and motioned him to sit down again, opposite her.

"Well, what's the matter?" Bruce asked, rather crisply.

"Do you really think, dear, that we are unchanged since the peace came in? Haven't you noticed any differences?"

"One or two. This city is one of them. That queer old patriarch Bax is another—"

"I don't mean those sort of differences," Freida interrupted. "I mean personal ones.

For instance, when I first met you during the war I was simply a fairly good chemist and nurse. Then on the day war stopped I woke up to find myself—well—clever." She paused and stared in a puzzled way through the window at the city. "It was as though somebody had unlocked a window in my brain and I could see and know all the little things I had only guessed at before. How else do you think I could hold down my job as first secretary to a wizard like Eberhart?"

Bruce was silent for a moment, then gave a wry smile.

"Come to think of it," he said, "I am a bit changed myself. When peace came I knew so much about flying that I felt fully able to take over the job of chief mail flyer and controller. And I'm making a good job of it too!" he went on eagerly. "I've enough money now for us to get married as soon as you say the word. I've no doubt the Eugenics Council will grant us our license."

The girl's next words chilled his enthusiasm.

"I'm none too sure that I want to get married, Bruce. It isn't that I love you any the less, but that there is something different inside of me. I—I can't quite explain it. As a matter of fact, I feel rather afraid."

"Afraid!" Bruce echoed. He laughed and caught her hand gently. "All that's the matter with you is that you have been working too long with that old dabbler Eberhart. And you are going to marry me, as you promised. Don't let old Eberhart scare you out of—"

Bruce broke off, staring fixedly. He noticed that the door behind the girl had opened silently and that Eberhart was standing there. With a sardonic smile Eberhart came forward into the office.

"Oh—er— good morning, doctor," Bruce got hurriedly to his feet, and Freida rose too and turned to face the scientist.

"Good morning, Bruce. I fancy my arrival was a little unexpected, eh? I've been pagging you through the building speakers. Miss Manhoff, never thinking you'd be in your private office here when you should normally be at the distribution center at this time." Eberhart stopped and surveyed the two young faces with his piercing eyes. "While I realize that your romance leads you to spend every moment with each other, I must ask you not to do it again. My time is valuable, and there is work to be done."

The two nodded meekly.

"You summoned me here, sir," Bruce ventured.

"Yes—to ask you to do something for me. You are piloting the Australian mail?"

"Within an hour, doctor."

"Good. On the journey I want you to take a cinerecord of anything unusual you may

see on land or ocean—particularly ocean.” Astonished, Bruce glanced at the girl, then back to Eberhart.

“What exactly do you think I’ll see, sir?”

“Unless I am very much mistaken you may find white hills on the ocean and seashores where none have been before. And if I were a younger man, and not your superior, I’d forgive you for calling me crazy. But I’m not, and I earnestly hope you won’t see any of these things. If you do, radio immediately.”

“Has it something to do with the Change which came to the world?” Frieda asked.

“Yes,” Eberhart meditated a moment, his lips tight. “I am afraid that an idealist at the head of the world may not prove quite so beneficial as a scientist.”

Bruce glanced significantly at the girl and turned to go, but Eberhart stayed him.

“A moment, Bruce. You and Miss Manhoff expect to get married soon, don’t you?”

The girl hesitated, but Bruce nodded firmly. “We do! We’ve been planning it for long enough.”

“And, if you are anything like normal young people, you intend to have a child, or children?”

The two looked embarrassed, and Eberhart gave his cynical grin.

“Don’t mind me. I’m simply an old dabbler interested in biological reactions. So tell me this—he studied them keenly—“Do either of you want children?”

“Well, I—” Bruce paused and frowned. “I’ve never given it much thought since the Peace came. Deep down, I don’t believe I care whether or not I have any.”

“And neither do I!” Frieda declared abruptly, her face flushed. “That was what I was trying to tell you a moment ago, Bruce, only somehow—somehow I couldn’t. Dr. Eberhart!” She turned to him earnestly. “Bruce and I are not normal. That’s the truth, isn’t it? Love for each other, yes—that’s still there. But there is no physical attraction. You can explain it, can’t you? While we’re on hard truths, let’s face it.”

“If I do explain it,” Eberhart said slowly, “I am likely to pronounce judgment on the people of this entire planet—and before I do that I have got to be sure of every fact. In the meantime, thank you both for being so frank. Okay, Bruce. That’s all. You’re going to miss your deadline.”

Bruce nodded, cast another worried look at the now silent girl, then went out.

“There is work to be done, Miss Manhoff,” Eberhart reminded her. “If you’ll come to the office I’ll give you your latest batch of instructions. Capital City certainly takes a lot of looking after.”

\* \* \* \* \*

To the east of Capital City, in the pas-

tural region given over to the rearing, breeding, and painless slaughter of animals, Overseer Meredith was faced with a problem. As newly appointed chief cattle controller, a job he thoroughly understood from his earlier life on a ranch before the war, it was his task to see that an uninterrupted supply of carcasses reached the storehouses of Capital City.

Normally it was easy enough—simply a matter of herding the beasts into the vast lethal chambers and ordering the release of the gas.

But right now the trouble lay in the fact that the beasts refused to obey!

Standing at the window of his little controlling kiosk, overlooking the vast area of synthetically created fields and grazing land, Meredith watched the efforts of his men to herd the beasts into formation. But they were getting nowhere. With an almost human obstinacy the beasts were forming themselves into circles and closing in on the hapless men giving the unheeded orders.

Meredith’s grizzled face became grim. He switched on the radio connecting him with the distant unit.

“What’s the matter with you mugs? Lost your touch?” His voice bawled over the open space. “How much longer are you going to take?”

“Not our fault, boss,” came the hurried answer. “If it wasn’t so darned cockeyed, I’d say these brutes know exactly what we’re going to do and are working against us!”

Meredith switched off, and pondered. An idea was twisting at the back of his brain. For some time now he and everybody else down here had been aware that the animals were behaving strangely. That an animal could defy a human being, especially a human being far more intelligent than he had ever been before—was ridiculous! It had got to be ridiculous because upon the control of the animals depended the chief food of Capital City. There was no synthesis as yet which could successfully replace natural meat.

MEREDITH suddenly swung to the door, his mind made up. Racing down the steps of his kiosk he jumped into the nearest tractor. As he sent the vehicle bumping down the runway he was impressed by the lowing and squawking of the massed cattle a mile away. Clouds of dust were rising in the hot, sunny air.

The nearer Meredith came to the disturbance, the more he realized it was not the fault of his men that trouble had arisen. It was the work of the animals themselves. In all, there were nearly three thousand head of cattle. Rapidly they had formed themselves into a mass four deep, like an army

of soldiers obeying a command. In front of them, in their one-man tractors, twenty men were bawling orders through microphones and using their small cannon pistols instead of old-time whips.

Meredith put on the brakes and glanced about him. The slide leading to the giant underworld lethal chambers was half a mile away and the beasts had their backs to it instead of their heads.

He switched on the microphone.

"Turn them around, you dopes! Drive them in! What are you waiting for?"

At that precise moment things happened. Perhaps, because of his amplified voice booming out, the beasts were startled. Whatever it was they attacked! Three thousand strong they charged with a suddenness and unity which was devastating. With flying hoofs and lowered horns they rushed into the midst of the hapless men in the tractors, buried them under a hurtling mass of bone and sinew—and they swept onwards through clouds of dust towards Meredith's solitary tractor.

For a second or two he was too astounded to act. Then, with a glance behind him, he jumped from the tractor and raced like a demon up the steps back into his kiosk. Even as he slammed and bolted the door that wall of living destruction cannonaded into it. It began to tremble under the blind onslaught.

Striding to the window Meredith gazed in horrified awe upon the living flood which had converted his kiosk into an island. In their dense, packed masses the beasts were sweeping towards the nearby city. Once they reached it—

Meredith gasped, switched on the radio-telephone, and had the operator at the other end send a messenger to summon Bax.

"Master!" Meredith cried hoarsely, as Bax's face appeared on the visiplate. "Master, the cattle have gone berserk! They're heading towards the city in organized formation!"

"Berserk?" Bax's eyes looked back from the screen. His voice was amazed. "How on earth did they ever get out of hand?"

Bax broke off, his eyes startled. Through Meredith's visiplate he had seen the events transpiring in the kiosk. He saw the door smash open suddenly before the impact of mighty horns. He saw too the malevolent glare in the eyes of the beast which slowly entered. The animal came with no maddened rush but with the calculated intent of a human being about to commit a murder.

"Meredith!" Bax shouted hoarsely. "Watch out!"

Meredith swung round and snatched out his gun. For answer the bull lashed out with its front legs and smashed the gun out of Meredith's hand. Meredith hesitated, sweat

pouring down his ashy face. Suddenly he tried to escape, and that was his undoing. The bull charged, horns down, drove them deep into the hapless man's chest. Impaled, he was carried backwards, crashed into the radio instruments.

To Lincoln Bax, tensely watching, the screen blanked.

## CHAPTER III

### *A World Mutating*

IN THE giant controlling office Bax stared in stupefied wonder at the dead screen. Then his secretary, who had followed Bax, spoke.

"Say, Mr. Bax, that bull acted like a human being! It used its front legs as we would our hands."

"I hope it was just that it looked that way," Bax muttered. "Otherwise—we have a major problem on our hands." He switched a button on the control panel and spoke briefly. "Sector Nineteen? Cattle stampede heading from breeding grounds! Destroy them as they approach. Keep them away from the machine rooms and conduct an inquiry as to the cause. Overseer Meredith has been gored."

Bax switched off and fingered his beard thoughtfully.

"I don't like it, sir," his secretary resumed uneasily. "Call it what you wish, but it looked like organized attack to me."

"But organized attack by animals!" Bax cried. "I can't believe that."

"I'm thinking of the way human beings have changed since Peace came in, sir. We all have got more knowledge—some of us more than others, like you and Dr. Eberhart. Maybe animals have progressed, too. They've been restive for months."

"Yes," Bax admitted slowly. "That's true. But I confess I never gave it much thought. I have been so busy planning for the welfare of the people it never occurred to me such an ugly development might arise in Utopia—"

He broke off and looked up with a frown as a distinct baying and barking came over the normal hum of the city. Moving to the window he stared down appalled on the vision of a black mass swarming towards the city from the north. Turning, he snatched up a pair of field glasses and stared out over the gleaming roofs of transit.

"Dogs!" he gasped. "Dogs by the thousand, all breeds, in ordered formation!" He swung back to the loudspeaker as an excited voice chattered at him.

"Outlook towers report convergence of



animal attack on the city, Master. Dogs from the north and cattle from the east. All domestic animals have left their owners. Some have unfastened their collars with their paws. Wild animals have found their way out of the open air zoos. All animals of fighting breed have formed into units of their own and are intent on attacking Capital City by force. Either they have been deliberately urged to it by some unknown scientific means, or else they've suddenly become highly intelligent. What are your orders, Master?"

"You'll have to destroy them, of course," Bax replied bitterly. "I don't like hurting dumb animals, but it must be done. Use air attack, and for ground attack use gas only. Nothing that is liable to cause taint. Most of the animals can be used for food later on."

He turned again to look through the window. The dogs—and it was plain there were other animals in their midst as well—were already pouring into the city pedestrian ways. Bax and his secretary watched in grim silence as their pouring hordes mingled suddenly with the flocks of people moving along the lofty ways. Men and women were flung helplessly into space, to go reeling down into the canyons of shining metal.

"This is frightful!" Bax whispered, distracted. "That it could happen in my Utopia, too, is worse."

He turned as the doorlock clicked. It was Dr. Eberhart who came in. He was wrapping a rough bandage around his blood-stained bare forearm. Half his coat sleeve had been torn off.

"Something is amiss with Utopia," he remarked cynically, seeing the surprised looks. "Place is full of mad animals. One bit me well and truly on the way here." He paused and eyed Bax directly. "This place needs a scientist to rule it, my friend, not an idealist. You see, animals have gone up a point in intelligence, same as we have. And you didn't know!"

"But I did," Bax answered simply. "I realized it suddenly, in a kind of flash of inspiration. But I did not think it would cause animals to become violent. Rather I thought it would make them more docile and anxious to be understood by humans."

"Your sense of idealism doesn't altogether appeal to me at this moment, Bax," Eberhart said acidly, massaging his arm. "You discover a great fact by a flash of inspiration while I provide the proof. Proof, I tell you—for which you'll no doubt take the credit. I have made experiments with dogs, and found they could—and can—distinguish



Bruce pressed the button and the explosion ripped the vegetation

colors, the titles on books, one number from another. They can reason, a thing no animal has ever been able to do before. Don't you realize what is happening, man? Everything is mutating! All forms of life! And in inexperienced hands that sort of development can breed a whole lot of trouble!"

**B**AX smiled gravely as he turned back to the window.

"You really believe you ought to rule, don't you, my friend?"

"Yes! Because I am a scientist!"

Bax was silent. Below in the streets there was slaughter in progress. Cattle had supplemented the dogs, and smaller animals. Obviously working to some organized plan, they were driving the men and women before them, hurling endless numbers of them to death in the dizzy ravines below. Down there lions and tigers were at work with snarling fangs and slaving jowls.

The din which floated up through the huge ventilators was a cacophony of bestial growls, human shrieks, and the thunder of animal feet. Then there came the rattle of electric guns as remote-controlled robots marched into action. Overhead, a fleet of defensive bombing planes made their appearance.

"I hope you realize that in destroying these animals you are likely to kill thousands of human beings as well?" Eberhart asked finally.

Still Bax remained silent, watching the rain of gas bombs and small explosives descending on the screaming struggle. He saw the transit walls sprayed with blood from humans or animals as one or other was blown in pieces. In routing this astounding invasion there could be no discrimination.

"You promised the people peace and contentment, Bax. Remember?" Eberhart's voice was coldly taunting.

"Because I believed I could give it to them," Bax replied quietly. "And I still believe I can. This is a tragedy, yes—but no great ideal was ever achieved without suffering. I could not keep the animals from going haywire."

"But I could," Eberhart murmured. "I could have foreseen it. After this the people will ask for a scientist instead of a so-called inspired leader to guide them."

"You sound like a jealous schoolboy who covets an apple," Bax smiled. "I believe the people trust me far more than you think."

He straightened up, majestic in his calmness. Outside, the scene was settling down again. Armies of men in tractors were coming behind the robots, forcing the animals in a madly disorganized multitude away from the pedestrian ways towards the great gaping eyes of the entrances leading underground. Once down there the brutes could

be forced inch by inch into the great underworld spaces where gas bombs, their fumes unable to dissipate, would make short work of them.

Bax sighed, turning, "I wish I could understand the sudden complexity of everything since the Peace. It's hard to analyze—for myself at least—this conviction of superhuman power, this longing to better the lot of the people, these glimpses of a future so perfect that they stagger the imagination. I just don't understand it!"

"I do," Eberhart said grimly. "I came here especially to ask you to come to my laboratory. I've solved the reason for the Change!"

Bax hesitated in surprise for a moment, then he nodded.

"Very well. I'll come with you right away."

When they reached the laboratory Bax was somewhat surprised to find Bruce Cranley and Freida Manhoff there. They got to their feet immediately as the two men entered. Bax looked at them inquiringly.

"Just two living witnesses to my theory," Eberhart said, larding an ointment over his injured arm. "I asked them to come here in case you might have difficulty in believing what I am going to tell you."

"Why should I?" Bax asked quietly. "I've never had cause so far to question your scientific ability. Why now?"

Eberhart frowned. "There are times when I wish you'd burst out into a fury, Bax—when I wish you'd show something of the savage fire which made you a military commander. I insult you to your face, and you only smile! If I were in your position and had your power I'd—"

Bax interrupted him, shaking his head. "No, you wouldn't. Not if you were me. Now shall we get down to the business on hand?"

**E**BERHART tightened his lips and glanced across at his radio transmitting equipment.

"This discovery of mine is going to stagger the world, Bax, when I broadcast the facts—which will be in about an hour. But before that all three of you are privileged to learn the truth in advance. You, Bax, know already that everything in possession of active thought has gone up one point. Do you know why?"

"No, I don't," Bax admitted. "Because of cosmic radiations," Eberhart said slowly. "You recall the stratosphere shells and high altitude warfare which was a dominant phase at the close of the war?"

"Surely. What of it?"

"Immensely powerful explosives in unimaginable quantities were dispersed through

the upper heights. The explosions, incessantly taking place, were sufficient to weaken the ionic layer which normally binds in the atmosphere at the greater heights. This Heavside Layer is—or was—also responsible for turning aside the flood of radiations, known and unknown, which pour down eternally from the depths of space. Normally only a few get through. But since the war, the weakened layer permits one excessively strong radiation to get through with a seventy-five percent increase in power. It is affecting every living thing. It may cause a catastrophe! Wait—don't answer yet. Let me show you!"

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## CHAPTER IV

### *Eberhart's Discovery*

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**E**BERHART turned aside for a moment and switched on one of his many instruments. In silence the group watched the electric patterns crawl across a ground glass screen.

"There it is," Eberhart said, cutting the power.

"Do you mean that this radiation is the one which has always been responsible for evolution?" Freida asked slowly. "That is—in a diluted quantity? Do you mean it is now unscreened and is pouring down upon us?"

"You readily grasp it, Miss Manhoff," the scientist acknowledged. "Ever since the world was born this ultra-short radiation—fixed by Eddington as one-point-three times ten-to-thirteen cms—has passed down to Earth's surface, masked in its full intensity by the ionic layer. Under the influence of the radiation, life itself was born and man mutated from the amoeba to his present high status. But since we have weakened the ionic shield with senseless warfare, everything now is evolving rapidly—too rapidly! That is why many of us are geniuses. The brakes are off! That is why animals can reason—and, because of that gift, they know only one dominating motive—survival! And to the animal mind survival means the destruction of everything likely to cause danger—humans in particular." Eberhart paused.

"Yes," he went on, at last, "everything evolves by progressive leaps called mutations. Even metals are included, especially an element such as your transite, Bax, perched right at the top of the Periodic Table. Everything will go on evolving! Centuries are telescoping. Some brains, of greater receptivity than others, have been more quickly affected of course. Like yours, Bax—and mine."

There was a silence. Bax stood lost in thought and Freida and Bruce glanced at each other.

"In time our skulls may even enlarge to permit of the expansion of our brains," Eberhart continued. "It almost seems as though some of us may become Bigheads, the envisioned type of last man. If you want any further proof, look at the sky. It is pale blue because there is more evidence of the black void which lies beyond it. The pure blue of the former days has gone. And there are other things, too! Cranley, tell the Master what you saw on your recent flights."

"I saw white hills in the Atlantic, Mr. Bax." Bruce's face was serious. "And there were carpets of little lights deep down in the ocean. By night it looked as if the sea were afire. And there were blood-red streaks of coral creeping up many a tropical coastline. I mean creeping, too! It grew while I looked at it. Then there were birds! I never saw so many in all my life. The skies are thick with them. I had to alter my altitude several times to avoid them."

Bax glanced at Eberhart for explanation and the scientist smiled.

"Those white hills and coral streaks are the products of multiplied algae and sea mites which are usually consumed by the bigger denizens of the deep," he said. "Heightened instinct has shown them how to avoid immediate destruction and in consequence they have increased so rapidly that they represent swelling hills. Every shore, every reef, is made up of millions of living mites and not solid matter."

Eberhart finished with a grim note. "Now comes the final and biggest shock of all! Every living thing is sterile! There is not even the wish for union between the sexes. These young people here—who as you know yourself, Bax, were so much in love before the Change—are only anxious to marry so that they can spend their lives together, and for no other reason! I have made endless tests and experiments and there is no doubt about it."

"Sterile!" Bax whispered, stunned for the moment. "What a merciless retribution for the war we fools waged!"

Eberhart gave him an impatient glance. "We are dealing with the present—and a desperate situation! I have here reports from cattle controllers which say that no young animals have been born for several weeks. The mating instinct is simply not there. The animals are confoundedly intelligent but they do not produce any young. That is the cardinal tragedy. The few cattle we have left after the massacre are the last. The slain cattle represented seventy-five percent of our total supply for Capital City. The re-

maining fifteen percent, intended as breeders, are useless. We can hardly have enough for three days' food."

"And other countries?" Bax asked gravely.

"Their food controllers report similar conditions. Sterility of animals—and humans—is world-wide and without explanation as yet. I'll have to produce synthetic meat as soon as possible. In fact I have a scheme under observation right now. But no matter how good it may prove, it cannot equal the real thing. The people won't like it, but since vegetarianism died out long ago as a harmful practise, I have just got to provide a meat substitute somehow."

**F**REIDA raised her brows in amazement. "Why should this increase in the rate of evolution stop births?" she asked, plainly puzzled. "I don't get it."

"Because bodies are evolving too!" Eberhart answered. "Heads are getting larger, organs are altering, emotions are being undermined. Everything is in a state of unbalance and flux—and procreation, the most primeval reaction of all, is wiped out by this onrush of rapid progression. It means that the higher forms of life, human and animal, are completely barren. The lower planes of life, after an orgy of births, will also have the same blight descend on them. Then it may spread to metals."

Eberhart paused and took a deep breath.

"The world is threatened by destruction from creeping things in the form of solids on the one hand, and the human race doomed to extinction because of sterility on the other. I can picture it all—swift evolution; the Big Heads; the growth of the big and little things. The metamorphosis of plants, flowers, and trees; the power of intellect given to lowly bacteria. The world itself, down to its basic rocks, spinning ahead several centuries in as many weeks. A future reached which should have been barred for ages to come. It's not a pretty picture, but it is one we have to face—and you, Bax, in particular as ruler."

"And the answer to it all?" Bax asked quietly.

Eberhart did not respond. Instead he turned to a sub-standard movie projector, rethreaded the film through the gate, and switched on the motor. Upon the screen there followed a succession of color scenes, all taken from a height of perhaps five hundred feet, showing markedly the gradual inroads of streaking coral and white sea life, the oddly shaped islands in formerly clear ocean, the monstrous green tentacles of swelling plant life up formerly barren hillsides.

"That is the movie record Cranley here brought home with him at my request,"

Eberhart said, when it was over. "And you ask me what is the answer to it all! If there is one, it means an effort to create synthetic human beings on the one hand, and the use of every conceivable weapon to destroy this teeming life on the other. We're facing another war. Bax, which only one man can fight with any success—a scientist!"

Bax pondered for a moment. When he looked up there was an odd gleam in his deep blue eyes.

"You never miss a chance to try and depose me, do you, Eberhart? Why is it? Have you a dislike for me, in spite of our happy association before the Peace—or an abnormally strong ambition which swamps your better judgment?"

Eberhart gestured impatiently. "It is just the fact that only science can hope to save this situation. For that reason a scientist should be the Master. For instance, if I had been ruling from the commencement I would have foreseen the cattle outbreak and taken steps to prevent it. Another thing, when I put this synthetic meat out for consumption, there may be a lot of people who won't like it. They'll blame you for your shortsightedness in not anticipating the trouble, just as they will blame you after I have broadcast about the Change and warned them what it means."

"I am prepared to accept the responsibility," Bax replied quietly. "I trust the people. They will understand after the broadcast I intend to give that I cannot be blamed for what is obviously a freak of Nature."

"What will you offer them as a remedy?" the scientist demanded. "Inspirations? Messages from the gods? They are human beings, deprived of the most primitive of functions. They will expect more than your ideals, Bax!"

Bax's tall figure straightened up. Clenching his big fist he beat it softly on the bench in emphasis to his words.

"Once and for all, Eberhart, we must have an end of this wrangling between us. There cannot be two masters. I intend to maintain my position. I choose to rule by the wisdom conferred on me, believing in the essential rightness and decency of human beings who follow me. I don't expect a path of roses. What problems there are to solve will be solved. The Deity which changed me will see me through. It enabled me to envision Capital City, to discover transite, to know that intelligence had risen up one point. It will not fail me now. So long as the people trust me I shall continue to rule them.

"So, my good friend—which I hope you still are—I must thank you for the brilliance of your research and be on my way. When

you have anything to report on synthesis, perhaps you will acquaint me?"

Eberhart just stared at him.

**B**AX turned away, nodded farewell to Bruce and Freida. Quietly he left the laboratory.

"So long as the people trust me," Eberhart repeated slowly. He stood thinking. Then he turned abruptly to the radio equipment and caught sight of Bruce and Freida. He started a little as though he had forgotten their presence.

"Thanks for your corroboration," he said briefly. "I'll send for you when I need you again, Miss Manhoff."

She nodded and both of them took the hint to depart. Out in the corridor the girl looked at Bruce inquiringly.

"Well? Any observations?"

He gave a rather rueful smile. "In face of this I don't see how I can have. It sort of takes your breath away trying to imagine what might be ahead of us. In spite of it all, though, I don't see anything to prevent us getting married. We know it will be just marriage, and nothing more."

"Yes." Freida's voice was colorless. "I guess we'll go into it with our eyes open."

For a moment Bruce fancied he caught the glint of tears on her long lashes. Impulsively he caught her to him.

"Don't start worrying, dear. Something will turn up. Things like this just can't happen. Anyway, Eberhart is genius enough to think of something."

"Or anything," she said pointedly. "That passage at arms he had with Bax showed me plenty! And I don't forget his last remark about Bax staying ruler as long as the people trust him. It would be about like Eberhart to create disgust if he could."

"He'd never dare!" Bruce cried.

"No? You don't know him as I do, Bruce. You haven't worked beside him and heard some of the remarks I've heard. I think Bax got the dirty end of the stick over this business and his pride won't let him show how

hurt he really is. I mean to hunt him up and tell him we're all for him. Perhaps you'd like to come and add your own bit?"

Bruce glanced at his watch. "Okay. I have an hour before I must report at headquarters. A little expression of loyalty mightn't do any harm at that."

## CHAPTER V

### *Dangerous Formula*

**W**HEN THEY reached the head office Bax greeted them cordially enough from behind his big desk and bade them be seated. Considering the outlook for the future he did not appear particularly perturbed. But then he never did. There was a rock-like calm about him which manifested itself at all times.

"I—er—" Bruce began, wondering exactly how to start. "That is, we—Miss Manhoff and I—"

"Suppose I save you both a lot of embarrassment and thank you outright for coming here to express your loyalty to me?" Bax smiled.

Bruce opened his mouth, then closed it again. He caught the girl's surprised glance. Then Bax broke into a chuckle.

"There you are, you see!" he exclaimed, raising his hands. "The most peculiar ability to get strokes of prescience and genius without even asking for it. The ability to read thoughts, even! The touch of the gods indeed! Confidentially speaking, I hardly know whether to be interested or scared to death! It's a weird change for a tough military man to experience—"

Bax broke off and searched the two young faces earnestly.

"Since you came here to express your loyalty to me, I take it that you wish to work against Eberhart?"

[Turn page]

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"I do, anyhow!" Freida declared defiantly. "He was a grand man before the Change, but not any more!"

"You are young, Freida, and a little impulsive," Bax said quietly, again leaning back in his chair. "Eberhart is a brilliant scientist and a man to be respected. I shall not enjoy fighting him, even though I realize it is almost inevitable that we'll come to loggerheads in the end. I have listened to his radio speech and in ten swift minutes he made it clear that he blames me for the sterility gripping the world. He says he could have prevented it!"

"I doubt it!" Bruce snapped. "That's just a lever to turn the people against you!"

"You're going to broadcast a reply surely?" Freida urged.

"After my own fashion, yes, with none of the scientific terms Eberhart handles so expertly. I shall rely on the trust of the people." Bax got up suddenly and beat his big fists against his massive forehead. "If only I could give them something more than just promises! If only I could get another inspiration, like the one which gave me transite. I suppose it's no use for me to go on like this, though. One can't force such things."

He paused to calm himself.

"You see," he finished, "it is not for myself that I wish to remain ruler, but because I know Eberhart's methods in place of mine would lead to disaster. He isn't touched by the powers-that-be—he is simply a scientist, ruthlessly efficient."

"We want to help you, sir," Freida put in earnestly. "We'll do anything to keep the people on your side. Anything! You're our ruler and our allegiance is to you, not Eberhart."

"That's it exactly," Bruce added. "How can we help?"

"Only in one way," Bax answered slowly. "You work beside Eberhart, Freida. Tell me when you find him doing anything which you feel might be detrimental to the peace of the people. That is not spying, as I see it—it's just common sense."

"I'll do it!" she promised.

"Surely there's something I can do?" Bruce insisted.

"Not as specifically as Freida. You can keep a careful record of this algaec life and report to me on its advancement and possible danger. I can check Eberhart's reports that way. The voice of Bax became abstracted. "Later it is more than likely you'll both have real chances to prove your loyalty. I see it ahead of us—dimly. Certainly I shall never forget this unasked for allegiance to me. Never!"

With that he shook hands firmly with them both. They left. Out in the corridor again

they exchanged resolute glances.

"Keep your eyes peeled, Freida," Bruce urged. "The sooner you can find Eberhart up to something, the better it will be for the good of Utopia, I'm sure of it."

She nodded. "I'll watch him—every hour."

Bruce caught her arm.

"But when I come back from this trip you must take time off to get married. Bax can perform the ceremony. If you're willing?"

She nodded again, silently.

"Good! Then I'll be on my way and make a call at the Eugenics Council offices on the way to the airport. They'll have our application rejected or accepted by the time I'm back." Bruce kissed the girl gently. "So long, sweetheart—and don't let the boogie-woogie man get you down too much."

**F**REIDA had barely returned to her office in the Eberhart Administration Building when she received a call from the scientist over the radiophone. She found Eberhart busy in his research laboratory, bending over a test-tube. Without looking up he motioned to a sheet of metal foiling covered with chemical symbols lying on the bench.

"The formula for synthetic meat," he said, studying the bubble of liquids before him. "See that Bax signs it, and then deliver it personally to our chemical department. Once that is done, distribution of synthetic meat can begin almost immediately."

"Very well, doctor," Freida picked up the foil and prepared to go.

"And, Miss Manhoff!"

She looked back expectantly. Eberhart had straightened up from his work and was regarding her steadily.

"Miss Manhoff, I would like you to remember that while you're in my employ every secret of this laboratory is ours alone."

Freida colored a little. "I don't quite understand."

"Then I'll make it nakedly plain!" Eberhart snapped, an ugly tightness settling on his lips. "I know all about the visit of yourself and Bruce Cranley to see Bax—all about your touching oath of allegiance. I am not quite the fool you seem to think. As chief scientist and builder of this city, I took good care to wire every important building with invisible sound pickups. It is still my avowed conviction that I should rule, and not Bax, and the various so-called private conversations my listening staff hear convince me of it. So be warned! I can assure you any childish spying by you or Cranley will be dealt with very promptly—by me!"

The girl gazed at him wide-eyed. For a moment he had taken her off guard. Then, characteristically, he switched right off the subject, swore, and rubbed his arm.

"This confounded dog bite is giving me



trouble! Have to find something to ease it. Poison, I guess. Okay, that's all."

"Not quite," Freida said curtly. "If I find anybody, even you, plotting against Bax I shall consider myself justified in calling it treason. And if I decide to speak, you won't stop me!"

Eberhart bared his muscular arm and kneaded ointment into the inflamed wound.

"You are a sensible woman, Miss Manhoff, so get this," he said slowly. "Any unwise words by you to Bruce Cranley before your marriage, and you will find he won't return to be married! Any unwise words after your marriage and you'll find yourself a widow, rapidly—unexpectedly. Science can reach a long way when I wield it, young lady."

"You—you would strike at me through him!"

"Yes, because you are a woman of courage. All I could do to you personally would be time wasted. For his sake I'm sure you'll exercise caution. And now forget all about this unpleasant business. I've had my say and it's done with. Do your work faithfully and we'll both be satisfied."

Freida compressed her lips and Eberhart smiled at her crookedly. She left him still massaging his arm vigorously. Then when she reached her own office she sat down at the desk and reflected. It seemed peculiar to her that Eberhart should tell her to deliver the formula to Bax and at the same time threaten her if she dared to reveal any secrets.

What secrets?

She looked at the metal foil intently, studied the formula, then as her eyes settled on the word "phanocin" her heart gave a little leap. Snatching up a pencil she figured rapidly in percentages, jotting down the proportionate quantities of the formula.

Afterward with a grim face she relapsed into thought. Finally she pressed the visiphone button and Eberhart appeared on the screen.

"Well, what is it?" he asked her impatiently.

"Isn't there an error in this formula, Dr. Eberhart? You have fifteen percent phanocin in these ingredients. Compared with the other quantities the phanocin will taint the synthetic meat. I'm chemist enough to know that—"

"Will you please be chemist enough to deliver that formula to Bax as you were ordered to do?" Eberhart demanded. "And instead of thinking further remember our little conversation here a short while ago."

He switched off abruptly. Freida looked bitterly at the blanked screen, then snatched up the formula and headed out of the office with it.

**B**Y THE time Freida reached Bax's headquarters her intention to speak her mind and give warning of the danger in the formula had weakened. It was gone altogether by the time she faced Bax across the desk. "For your signature, sir." Her voice was colorless. "It's the formula for synthetic meat."

Bax took the formula and studied it.

"Sometimes I wish I'd learned chemistry," he said with a smile. "These chemical symbols are a little puzzling to the uninitiated. However"—he scribbled his signature in the space provided—"here you are."

She took the foil back without a word and Bax looked at her curiously.

"Why so depressed, Freida? You've no reason to be. Everything is going splendidly—in fact, better than I had dared hope. For awhile Eberhart's glum prophecies concerning the future almost caused trouble among the people but my own short broadcast, just before you got here, leveled things out again, so my scouts tell me. Now with the meat problem solved, we are starting to get things cleared up. Science will master all our troubles finally. I'm convinced of it."

"Yes sir—I suppose so," Freida said, smiling faintly—then, conscious of Bax's puzzled eyes upon her, she turned and departed.

She had a stern mental struggle during her monobus journey across the city to the manufacturing chemists' department. Bruce's life was forfeit if she said a word to Bax, yet hundreds of people were going to be ill if she kept quiet. Bax, no scientist, had signed the formula and he would get the blame when things went wrong. Eberhart had obviously planned it that way.

When Freida heard the general talk of the people in the monobus and later in the streets, she felt even worse about what she knew. They were perturbed after the two broadcasts, certainly, but none seemed willing to blame Lincoln Bax. But poisoned food might change their sentiments.

Freida felt as if she were actually inflicting an actual wound on Commander Bax when she finally handed in the formula to the chief chemist for manufacture.

"Lots of phanocin here," he commented.

She smiled bitterly. "Dr. Eberhart seems to know what he's doing—and he's the boss."

"And Bax has passed it!" The chemist shrugged. "Okay, we'll start mass production right away."

Freida left the building moodily, upbraiding herself for not having deleted the phanocin from the list. No, she would not have dared do that. There was Bruce's safety to consider, and her own employment. She turned and went towards the monobus stop, sure that she had betrayed everything she held sacred.

## CHAPTER VI

## Concerning Virus

AFTER TWO days at her usual laboratory work—days in which bitter self-reproach still clouded her mind—Freida found herself ordered to do the very thing likeliest to rub salt into the wound. Eberhart gave her brief instructions to supervise the distribution of the synthetic meat, now ready for the disposal centers.

She took the usual fast monobus to the city center and walked the rest of the distance to the great underground storage chambers where her task awaited her. She was glad of her decision to walk. Lots of things came to her surprised ears. Existing as she did in the upper quarters of the governing clique ordinarily she had little chance to mix with the masses and learn what they were thinking and doing.

But she was finding out now—with a vengeance.

Several times she passed men and women on the lofty pedestrian way, caught snatches of their conversation.

"Makes you wonder if Bax is all he says he is," one man said.

"Aw, you can't get away from the truth," came the answer.

"This fellow Eberhart might have prevented the cattle massacre," said the first man. "Remember that."

With a deepening sense of worry Freida hurried on. She came suddenly upon a robot deliberately clanking along at the edge of the pedestrian path. Most of these complicated radio remote-controlled creatures were hired out to business enterprises for the purpose of advertisement, much the same as pre-Change sandwich men used to perambulate. But this particular robot was not extolling the virtues of a particular product by any means.

It was carrying a voice-box in its metal hand—a microphonic instrument fitted with a perpetual roll of sound track. The voice shouting forth was strident, harsh—unnaturally clear. Freida recognized it as synthetic track, a voice created by microscopic drawings of peaks and valleys on the sound track, reproducing the tones of a voice which had no living owner.

Freida paused to listen, glanced up and down.

It was quieter here and she could give greater concentration.

"—hundreds of you, all innocent, died in a ghastly massacre because the man who rules you had no idea of what was going to happen, nor has he now. The blood of thousands of innocents is on his head—the inno-

cents who died in the quelling of the cattle stampede. Eberhart has told you that the world is faced with destruction from excessively evolved life and that you, the people, are doomed to sterility.

"Lincoln Bax has told you to have faith in him until, like Moses of old, his inspiration leads you to a life of normality and a world purged of the creeping, swelling, growing death which threatens it. Why are you so blind as to accept idealism before science when your very lives depend on it?"

Then the speech began all over again. Freida stared at the robot fixedly as it lumbered onwards. This was open propaganda, incitement to revolt, and scattered about the city there might be hundreds of such robots shouting similar messages.

Suddenly Freida's indecision vanished. She acted. There was nobody immediately near to her. Running after the robot she caught its breast-plate and quickly unscrewed it. Turning the breast-plate over she wiped off the film of warm oil, and peered at the die-stamp—43 ERL. That was enough for her. The letters stood for Eberhart Research Laboratory, as she'd good reason to know. She smiled mirthlessly as another robot nudged her aside, and went clanking by.

She replaced the breast-plate of the first robot. Then reaching into the voice box she felt with her fingers for the steel sound track tape whirling on its cogs. A tug, and the thing was done. Voiceless, the robot went on its mannikin way.

What to do now? Freida thought swiftly. Definitely it was high time for Bax to hear of the intrigue going on behind his back. But Bruce? Again that pall of hopeless depression settled upon Freida. She dared not speak—not yet anyhow, so, grim faced and pensive, she continued on her way.

Ten minutes later she reached the main food storage depot and for the next two hours was kept too busy arranging the details of food distribution to think of anything else. But an idea was at the back of her mind just the same. When she finally left, she had with her a piece of the synthetic meat which she took home.

Off duty in the evening, she deliberately ate some of the meat for her dinner, then settled herself on the divan to await results. She realized she had deliberately put herself in for what would probably prove an uncomfortable time, but she figured it was worth it if only to find out if her suspicions about phanocin were correct. Eberhart had spoken truly when he had said she was a woman of courage.

TEN minutes passed—thirty minutes, and she felt quite normal. Puzzled, but with a growing sense of relief, she switched in to

a teleplay and settled herself to enjoy it. She was absorbed in the drama of the first act when suddenly the symptoms struck her!

A javelin of pain went through her chest, and another, until they merged into such insupportable anguish she felt herself close to fainting. It was an overwhelming suffering, as though powdered glass were driving through her bloodstream. But at least this was what she had wanted to find out. It showed the deadly power of the phanocin. Even amid her torture she had another thought—an antidote. If she could find one she might yet cure herself and at the same time enable Bax to be saved from disgrace. It all depended on whether she could stay conscious long enough to make a diagnosis.

Gritting her teeth she dragged herself from the divan and into the small adjoining room she had fixed up as a little laboratory for private research. She was shaking so much from pain she could hardly hold the syringe steady enough to draw off a blood-sample from her arm.

Fighting for control she let the droplet fall on a slide and then examined it through the microscope. In a moment her biological training showed her vital differences. The power of the lenses clearly revealed the streaks of phanocin which had been absorbed into her bloodstream—but they also showed something else. The blood itself was different, something she had never suspected.

With a shaking hand she drew the notepad to her and scribbled quickly:

Fast enlargement of bacteria in the bloodstream. The quantity of phanocin used by Eberhart would probably produce violent abdominal pains if a person were normal. But nobody is normal any more because bacteria is enlarged and has progressed in evolution, like everything else since the Change. Therefore the injurious effect of bacteria on the human system is increased a hundredfold. Death is not unlikely—

Freida broke off, the pencil dropping from her fingers. The room was spinning round in a torrent of anguish. She had a last remembrance of plunging headlong from her stool into darkness. . . .

When Freida became aware of her surroundings again she was lying in bed with the shades half drawn against the sunny windows. For a moment or two she remained silent, collecting her wits—but underlying everything was a heartfelt thankfulness that she was free from that appalling pain. She felt almost normal, but weak. Then she moved slightly and looked around her. The action brought a nurse to her side.

"Don't worry, Miss Manhoff, you're better again now," she said with a smile. "Just take it easy. You've been very ill for a couple of days, but Dr. Eberhart is quite satisfied now that you'll be all right."

"Dr. Eberhart!" The mention of his name made Freida rise suddenly on her elbows. Then she sank back as her head swam dizzily.

"I'll fetch him," the nurse volunteered, and left the room. Freida waited, a thousand fearful thoughts chasing through her brain. Presently the door opened again and the scientist stalked in. He came to her side, made a routine examination, then stood looking down at her.

To Freida it seemed as if he somehow were different—or else it was her distorted outlook due to the illness she had been through. His face was set in harsher lines, and his eyes were cold and stern instead of twinkling with cynicism.

"A few hours and you'll be well again," he said briefly. "I have written out instructions for Nurse Grantham. She'll know what quantities of antidote and restorative to give you."

"Thanks." Freida's voice was tired. "Good of you, Doctor, to grant me your personal attention."

Smiling coldly, he turned, pulled up a chair and sat down beside the bed.

"By rights I should have allowed you to die," he remarked. "Both for turning yourself into a human guinea pig, and because you have now so little left to live for."

Freida stared at him, and knew that he meant it. The harshly set lines of his face were enough.

"I mean that your employment with me is finished," he went on. "I gave you warning that it would not be to your advantage to make too close a study of laboratory secrets."

**R**EACHING into his coat pocket, he held forth the note she had made on her condition before collapsing.

"I think it more than likely that you intended this diagnosis to go to Bax!" he snapped. "Luckily I found it first. When you did not arrive for your duties, I personally made a trip to see what was wrong. I found you unconscious with this note on the bench."

"Hundreds are going to die through eating that meat!" Freida cried, stung into resentment. "You engineered it that way."

"I am the chief scientist of this city, Miss Manhoff, and I will not have you questioning my actions. First I have this diagnosis. It shows you intended working against my interests. Then I had more evidence in the return of a robot to my headquarters with its voice-box sound spool smashed. The fingerprints on the tampered breastplate, originally sealed by me, tally exactly with yours at the Identification Bureau. At least I know where you stand, Miss Manhoff!"

"It's a wonder you took the trouble to cure me," Freida muttered.

"Simply because you made yourself the perfect victim of tainted meat. You served as an experimental specimen. I have satisfied myself that an antidote I have perfected is okay. Bax passed the meat formula and the people will become ill because of it. I will cure them, and at the same time make certain that my propaganda tells them the truth. There it is, simply explained."

The girl remained silent. Then Eberhart got to his feet.

"You wonder why I disclose all this? Why not? If you tell Bax you'll lose your fiance on top of everything else: if you don't, Bax'll find his rule is ended quickly enough by the people themselves."

Freida still said nothing and a shade of irritation crossed Eberhart's face.

"It's no joke to be unemployed in this city. Miss Manhoff, as you'll soon find out. And you'll stay unemployed. I'll see to that!"

She looked up at his threat. "I was just trying to decide, Doctor, what it is about you that's so different. You've never been a particularly considerate man, but now—somehow—"

"I'm without sentiment?" he suggested. "I'm really enjoying this—and there's a biological reason for it! You remember the dog bite I got? There was virus in it, and in the present state of bloodstream bacteria—about which you already know so much—it is impossible to cure it. It will have to pass away of its own accord. The biological effect of the poisoned bloodstream reacts on the quality of the blood feeding the brain, of course. The result is not a diminution of genius but a deadening of those areas responsible for restraint, conscience, compassion, and so on. Until the effect wears off I shall be devoid of such emotions—and glad of it! It comes at a time when a personal sentiment might hinder my plans for supplanting Bax."

"And it explains your merciless attitude towards me?"

"Exactly. And this, I fancy, is the end of our association, Miss Manhoff. I will see to it that Nurse Grantham has the necessary instructions to speed your recovery."

With that Eberhart left, and in a few seconds the nurse came in. Freida took the injections given her without a word. All she wanted now was complete recovery—and action. Her mind was made up.

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## CHAPTER VII

### *Touch of the Gods*

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**J**AN EBERHART, surrounded by the myriad complex machines of his own

creating, stood facing Lincoln Bax.

"So, my wonderful idealist, you are in trouble?" he asked, smiling grimly. "The people of this glorious Utopia are ill! And you want to know what I can do about it?"

"That is why I came to you personally," Bax answered. "Deputations by the score keep coming to my office, demanding to know what is wrong with the synthetic meat they've eaten. Some have died already, and others may succumb."

"Others will die!" Eberhart said. "Let me show you."

He snapped a switch and three telescreens came into action with their accompanying sound. The powerful probing photographic beams projected from the laboratory reacted right on the great living center of the people. Like a panoramic movie scene Eberhart swept over a whole range of harrowing incidents, mirroring them in the three screens.

Bax stood in grim silence watching the endless parade of squirming human beings, listening to their groans, their dry-lipped curses at him for passing the deadly formula. Tortured people were everywhere—in their homes, in the streets, some at the last gasp of life. Amid these scenes moved the forms of harried doctors and nurses—exhausted, baffled.

"This ghastly business has a far greater hold than I ever realized," Bax muttered, as the scientist switched off the current.

"I agree. All Capital City is involved. Since this is the leading metropolis of the world, the other cities can be forgiven their scathing criticisms of your leadership. I have heard them over the radio, and read them in the newspapers."

"But how on earth did it ever happen?" Bax demanded. "What was wrong with that formula anyway?"

"When it left me—nothing," Eberhart paused significantly. "After you had signed it, it was altered by Freida Manhoff. I have full evidence of it. She even ate the synthetic stuff herself to find out conclusively just how ill the people would be. On top of that she has been engaged for some time in subversive propaganda directed against you. I have her fingerprints on the very robot which did most of the talking! A little while ago I saw her in her apartment. I told her that she is dismissed. But she is now well on the road to recovery."

"And why did she do such a thing?" Bax asked, frowning.

"It's hard to say. But it's probably because she's a scientist and in a position to do what she liked with equipment and formulae. Doubtless she believed she was doing the people a good turn by increasing my popularity and decreasing yours. Since that isn't playing the game fair, I discharged her. In

all probability now she will appeal to you, with some kind of fantastic tale."

Bax looked at the scientist steadily for a moment.

"You said you cured her?"

"I did. Here is a sample of her personal diagnosis. You know her handwriting. Read it for yourself."

Bax took the girl's note, pondered it, then returned it without comment.

"You cured her," he repeated. "How long did it take you?"

"No more than three hours after diagnosing the trouble."

A grim smile lighted Bax's face. "You're not very clever, my friend! You could not devise a cure for such a terrible malady so quickly without knowing beforehand the nature of the trouble."

"Are you suggesting that I poisoned the people?" Eberhart snapped.

"I am telling you you did! From my own acquaintance with Miss Manhoff—"

"And her allegiance to you," Eberhart sneered. "I know all about that—"

"Loyalty to a ruler is the first responsibility of a citizen," Bax interrupted. "Only you could have thought of a scheme as deep as this, and because you are afraid of Freida Manhoff you are trying to thrust the blame onto her, discredit her in advance for anything she might choose to disclose."

Bax took a step forward, his bearded face stern.

"As you know, Eberhart, our antagonism has not exactly been concealed for some little time now, and I'm sick of the ruthlessness you're exercising to overthrow me. You are making one big mistake. You take me for some kind of angelic idealist who hasn't the power to hit back. I am still the ruler. In that capacity I order you to use your antidote to cure the people you've poisoned. At the same time you must admit the mistake in the formula was yours!"

**E**BERHART'S anger blazed. "What do you take me for? You say I did this thing. Very well, you cure the people with one of your great inspirations! It's time one of them worked again anyway!"

Bax stood motionless for a moment, a far-away look in his eyes.

"Perhaps I will," he replied slowly. Then without another word he strode out of the laboratory, leaving Eberhart staring after him in puzzled annoyance.

Bax found Freida Manhoff waiting for him when he reached his office. She looked pale and tired as she got to her feet.

"Sit down, young lady," Bax exclaimed. "I know of the torture you have been through in an effort to protect my interests. Yes, I see it all now," he went on, regard-

ing her broodingly. "You tried to stop the propaganda, and you poisoned yourself in the hope of finding an antidote which you intended to hand on to me. You lost your employment, and now you know you are risking the life of Bruce Cranley in coming here now to testify against Dr. Eberhart."

"You're absolutely right!" Freida ejaculated in wonder. "How on earth did you learn that?"

"Just one of those times when a whole sequence of events in a past time is crystal clear to me," Bax said quietly. "And now that I have had the revelation, there comes the accompanying inspiration, that little touch of the gods. We are fighting Eberhart with the gloves off now, Freida, and we are going to win the first round anyway!"

"How?" the girl asked hopelessly. "He has the antidote."

"I know. And he cured you with it."

"Yes, but—I don't see the connection, sir."

"Just this!" Bax drew up a chair to face her. "You were clever enough to think of making a diagnosis of your bloodstream after you had taken phanocin—and you got first class analytical results under the microscope. Now you must do it again to determine the ingredients of the antidote!"

Freida thought swiftly. Her eyes gleamed.

"I see what you mean now! Because there must be some traces of the antidote still in my bloodstream you wish me to examine a blood sample and analyze its contents?"

"Right!" Bax caught her arm and she got to her feet. "We have a laboratory wing in the building here where we can soon settle the question. Come with me."

She hurried beside him eagerly, and in a few minutes he had thrown open a door for her on a lower floor. Before her was a small, fully equipped but deserted laboratory.

"Here you are," Bax said. "Now go ahead with your analysis."

From her arm she drew off a blood droplet carefully and daubed it on the microscopic slide. Quickly she focused the lenses.

"This was one great idea you had, sir!" she declared after a while. "Everything is here, in minute quantities."

"Enough for you to make an analysis?"

"Definitely!" She turned to the test-tube rack and began to busy herself with reagents, catalysts, and other chemical impedimenta, jotting down notes as she went. Bax watched her intently, quite in the dark so far as chemical knowledge went.

"Yes, I think I have it!" she announced at last, studying the formula. "All the ingredients are in good supply in our big laboratories. Only—"

She broke off with a troubled frown, thinking.

"What?" Bax inquired.

"I'd forgotten that Eberhart controls the laboratories and that I'm no longer employed by him. He'd never allow me to get anywhere near them."

Bax grinned in a savage way. "That doesn't even enter into it. We've got all we need in the way of chemicals right here. I had this laboratory stocked up in case of an accident any time to our headquarters. Tell me the percentages necessary and I'll weigh them out while you make them up. Here"—he waved his hand to the complete array of bottles—"take your pick. And don't forget we'll need enough to cure about three thousand people."

Freida nodded. Consulting her list, she read out the necessary ingredients. Bax had pulled off his coat. Now he went to work vigorously.

"We've got to move fast, you know," he remarked presently, busy with the spring-balance.

"I know, with deaths multiplying every hour."

"Not so much because of that. Freida, but to prevent Eberhart from getting there first with the antidote. If he does, his trick will have succeeded. He'll be the savior and I'll be the miscreant. Not that it's likely though. He'll never believe we can find the antidote without him."

**F**REIDA suddenly straightened up from her task with the measuring glasses.

"He won't, unless—" She paused. Then, in a worried fashion, she began to crouch up and down the laboratory, peering into all the odd corners and behind the shelves.

"What on earth?" Bax demanded at last, as she climbed up onto the next bench and examined the ornamental angle of the roof.

"This!" she retorted, and with angry tugs pulled the ornament clean away, snapping the slender wires behind it.

"Microphone!" Bax ejaculated, as she dropped it into his hands.

"Yes, a mike." She jumped down beside him. "I just remembered that he once told me he had wired up every important building when he built the city."

Bax's lips tightened.

"I'll see to it that they're found and destroyed. I begin to realize now how much I underestimated Eberhart's ambitions."

He tossed the microphone to one side. Then with a shrug, he went on with his work.

"The damage is done now anyway," Freida muttered. "He knows just what we're up to. Our only chance is to beat him to it."

Thereafter they became too busy even to speak, except for vital remarks connected with the job. One hour passed—two hours. By that time there was an array of phials, all tightly corked, on the table. Freida

straightened up with a little sigh and rubbed the small of her back wearily.

"I think we've enough here now, sir, considering the small quantity each patient will need. We're ready to go."

Bax nodded and put on his coat.

"Right! You pack them up and I'll have my fastest plane on the roof park within ten minutes. Join me there."

"You are coming too?" Freida asked in surprise.

"Certainly. There may be risks attached to this, since Eberhart knows so much. Better if we work it out together."

Back in his own laboratory Eberhart was facing a grim, stolid-faced pilot. At one time the pilot had been a criminal, until the Change had swung his interests into different channels. Now he was the kind of servant Eberhart trusted most—spy, thief, and if paid sufficiently, still a killer at heart.

"I've a job for you, Morgan," Eberhart said, starting to pace up and down. "It's the biggest thing you've ever had to do for me. If you succeed I may become the ruler of Capital City, and you will occupy a prominent position. If you fail it may cost you your life."

"A man dies but once, and my job is to serve you," Morgan replied, unmoved. "What do you want me to do?"

"I have it on good authority that Freida Manhoff, my former assistant, will be leaving Administration Building presently for the city center, where the illness has broken out. Your job is to prevent her from getting there! That's imperative—vital! It's possible that Bax himself may go along with her, but I can't say for sure, because someone broke the secret microphone before I could find out everything. They both have guessed I'll try and stop them, so watch your step."

"Do you want me to kill them?"

"Not if you don't have to. Just delay things so that I can get there first with an antidote. I can't let them. There's two of them to do the work while I'll be doctoring the people all alone."

"I get you. Plane or car?"

"Use a plane. Cruise around and watch the Administration Building."

Morgan nodded. "Okay. I'll make it seem like an accident." Then at the door he stopped and rubbed his heavy jaw. "Say, doc, how come that you're doing it this way? With all the gadgets you've got here, couldn't you—"

Eberhart looked up impatiently from the preparation of his antidote.

"And have it traced to this laboratory? Don't talk silly! It's got to be an accident. And keep your mouth shut. That's a warning!"



Morgan nodded.

"You know me, doc!"

## CHAPTER VIII

### *The Spreading Doom*

**OUTSIDE** the Administration Building, Bax found Freida waiting for him in the airplane; and paused to ask an anxious question.

"Everything ready?"

"Yes," she answered and pointed at a small crate which was cushioned in the rear of the cabin.

Bax clambered into the driving seat, slammed the door, and then eased in the controls. Silently the machine rose straight up from the roof, hovered a moment over the canyons of streets with its helicopter screws whirling—then turned towards the city center.

Freida sat quietly for a while, glad to rest after her efforts in the laboratory. Then her eyebrows went up in surprise as she chanced to notice Bax's left hand. It had strayed to the switch of the small but deadly protonic gun, a magnetic weapon so contrived that it could be automatically sighted by magnetism. All that remained for the operator was to press the button.

"What's the matter, sir?" Freida asked presently.

"Matter?" Bax turned his massive head.

"Look where your hand is—as though you're expecting trouble."

"I am. But all the same it's difficult to explain why." Bax frowned ahead of him through the observation window, pursuing his thoughts. It was quite a while before he spoke again.

"You know, Frieda, I've discovered one thing about these queer inspirations of mine," he said finally. "Before I get a visionary glimpse of a future time, or a great idea, there is first a definite activity in the subconscious area of my brain. I've noticed it many times, and afterwards when I come to question the reason for the action I find that I know why. My knowledge of psychology isn't very extensive, but as I understand it, this is a matter of conation and realization, a desire to comprehend, a linking of subconscious with the conscious brain areas. The question is—why am I suspicious now?"

Bax paused, and Freida saw the gleam that came into his keen eyes.

"Of course there's a reason!" he cried. "We're being followed! We're liable to be killed!"

Following his glance, Freida turned to look out of the cabin window. They both caught sight of a fast, wicked-looking, bullet-nosed flyer power diving out of the blue straight towards them.

"There!" Freida screamed. "Quick! Turn aside!"

Bax's mane of hair shook silently. Freida's appalled eyes jerked to his grim, bearded profile for a moment, then dropped to his left hand. The muscles on it were taut and ready for action. He kept the machine steadily on its way, eyes fixed on the hurtling plane.

Faster, lower! In their imagination they could both hear the scream of riven air through their sealed cabin walls. Then with a violent twist, Bax abruptly hurtled his own flyer sideways. At the same instant the interloper whizzed down, wide of the mark by twenty feet. For a brief instant only he was level, but in that time the protonic gun sighted itself and Bax's fingers compressed the firing button.

Invisible streams of protons slashed forth from the weapon through the wall trap. A solid jet of protons slammed into the plane's body with the inevitable result that its whole basic makeup collapsed. It fell apart in mid-air, crumbled into a dozen disintegrating pieces and for a moment Freida had a glimpse of a human body turning, heels over head, as it dropped into the abyss below.

"I had to do that," Bax said slowly, releasing the gun and dipping the machine's nose towards the city center. "An antidote for thousands of ailing people is more important than the life of a murderous agent of Eberhart."

"You think he was Eberhart's agent?" Freida asked.

"I know he was! Better get the package ready. We'll be landing very soon."

**DR. EBERHART** was still hard at work in his laboratory preparing the antidote when the usual mid-day news bulletin came to him over the main speakers.

"Before our general news, friends, here is an item of outstanding importance. The toxicosis which struck down so many of us in the city is rapidly being brought under control. A hundred people have already been treated with an antidote devised by our honored leader, Lincoln Bax, and recovery of these people is certain. Before the day is over, others who have been afflicted will likewise be cured. They are being housed now in buildings hastily requisitioned and converted into hospitals. Lincoln Bax has ordered the synthetic meat distributors to destroy all present meat and manufacture another consignment which this time will be

perfect for human consumption, devoid of the particularly dangerous drug which somehow got into the previous issue—"

Eberhart reached out and turned off the speaker switch. In the ensuing dead silence he beat his fist slowly on the bench beside him. His anger grew. Swept by a sudden passion, he whipped up a chair and slammed it into the midst of the antidote phials.

He grinned a little as he watched the liquid splashing to the floor amidst the glass jave-lins.

"Nothing like a good physical outburst to relieve a mental shock," he muttered. "Now is the time to reason again calmly. This halo-headed ruler of ours wins the first round, eh? Evidently Morgan slipped up for the first, and last, time."

After pondering deeply, he turned to the radio short wave transmitter and switched it on.

"Calling Bruce Cranley, Machine Sixty-nine-A. Calling Bruce Cranley. Come in, please."

There was a momentary pause before Bruce replied. But Eberhart did not speak further. Instead he switched off the mike and studied the meters attached to the instruments, making a note of the readings. With a ferocious grimace, he turned the graduated pointer attached to a giant electro-radio transmission machine, mentally picturing the destructive violence that would be hurled forth on the carrier beam when he closed the main switch.

"At least Freida Manhoff cannot say I didn't warn her," he reflected. With that, amidst a crackle of sparks, he slammed shut the main switch.

For three minutes he left it in position, then pulled it open again. He had the air of a man who successfully has accomplished a very necessary job.

In the meantime, to Bruce Cranley the sudden failure in continued radio transmission was a complete puzzle. He called again and again after the original request to come in, but nothing happened. Finally he gave it up and shrugged.

"Some chump must have made a mistake," he grunted to Adams, his co-pilot.

"Yeah. Whole blamed world's a mistake since the Change, if you ask me. Look at that ice down there, and in temperate regions, too!"

Bruce looked, and his jaw set. It was a scene similar to the one that existed on the whole route to Australia and back—an ocean scattered with motionless areas of white. On the way out to Australia they had been small islands. Now on the way back they were vast solid fields through which shipping was having to pick a tortuous way. In fact, here and there, a vessel lay crushed

between opposing jaws of the stuff.

"Algae," Bruce said grimly. "Not ice."

"That stuff Eberhart talked about in his speech? Say, if it goes on growing like this, where's it going to get us?"

"In a mess," Bruce snapped. "Cosmic rays are causing it. You see," he added, for he knew Joe Adams' scientific powers were none too keen, "it's, because something has gone wrong with the law of Natural Selection."

Joe Adams turned a freckled face from the controls.

"What's Natural Selection?"

"It's a theory of Darwin's—sort of survival of the fittest. You see, he calculated that if the law of Selection didn't work it would produce a disaster such as this. For instance, in one of his books on biology he says that, if all the millions of eggs produced annually by a single oyster or sea urchin were to reach maturity, the sea would soon become a solid mass of the creatures. That is what is happening now. These sea mites are now intelligent enough to avoid the destruction which formerly overtook them."

Joe Adams pulled his pendulous underlip. "Sounds sort of bad to me. It isn't as if it was limited to the sea either. Just think of those jungles we've flown over. Green stuff thick as the devil."

ADAMS broke off suddenly. Bruce and he both looked at their plane motors in alarm. Mysteriously the motors had cut out. Then before either man hardly had a chance to check the fuel-gage, they saw an area of red and a puff of smoke from the port motor.

"We're on fire!" Adams yelled, leaping up. "Don't ask me why, but we are!"

He jumped for the emergency fire switch, but there was not enough time to use it. Livid fire crept across the wall of the cabin, cutting through it as though an acetylene flame were being used.

"Bale out!" Bruce ordered. "It's our only chance!"

He ripped the cabin door open and leaped into space, tugging his parachute ripcord as he tumbled downward. With a jerk his fall cushioned and he had the chance to look above him. Joe Adams was floating safely above him, not far off. As for their machine, it had crumbled into blazing pieces, each drifting downwards on the wind.

Bruce's eyes narrowed as he watched the smoking debris fall past him. There had been something unnatural about that crack-up. Perhaps it had been sabotaged, by somebody anxious to prevent the Australia mail from reaching America. Bruce's mind revolved around the possibility of photo-synthetic paint—a transparent substance in-

visible on ordinary paint, but generating terrific heat after a brief exposure to sunshine. It had been used in the war, and it might have been used here. It might have been something else. In any event he was unlikely to ever find out.

Then, glancing below, he bent his legs preparatory to the fall on the field of algae reaching up to him out of the sea. He landed safely enough and cast off his harness. In a few moments Joe Adams had dropped beside him.

"I don't like it," Adams growled, scrambling free of the belts. "Look at this stuff! It grows over your boots even while you stand on it."

Bruce glanced down and jumped aside in alarm. The white growth was living, crawling, spreading, for all the world like barnacled wax.

"We've got to move quick!" he shouted. "If we stop here long we'll be done. This awful stuff lives, remembers. Multimillions of sea-mites are dividing and increasing by the simple law of fission."

"But where the devil do we go?" Adams demanded, stumbling. "We can't just keep fooling around, away out in the middle of the ocean!"

"We're not in the middle. America was in sight when the plane caught fire. I saw it, low down on the horizon. We'll have to keep on the move constantly until we are either picked up or walk home."

"Walk!" Adams screamed.

"Yes—from chunk to chunk of this stuff."

"Five hundred or so miles of constant movement and never a rest! Not me!"

Bruce swung round impatiently. "It's no more than two hundred and we'll very probably be picked up. Come on!"

He strode forward resolutely, paused a second or two when he came to the edge of the solid area, then sprang with all his strength for the next nearest field. He fell short by a couple of feet and splashed into the water. Adams made the jump successfully and gave him a hand up. Then he uttered a shout of alarm.

"Hey, look out! You're crawling!"

Bruce looked down at himself, and started batting savagely at his saturated flying togs. From head to foot he was covered in a furry green mold of living sea-algae. His efforts dislodged most of it, but left rents and holes in his flying suit.

"This is mighty serious," Adams muttered, shaken. "If it goes on, we're goners!"

"It's us who've got to go on," Bruce snapped, and strode forward again urgently.

Neither he nor Adams slipped again, but the constant need to keep moving was exhausting in the extreme in the hot sun. At the end of three hours of this leap-frog

progress they were worn out and intolerably thirsty. Certainly their goal was visible in the distant haze of the afternoon, but so far away, that the misty, purple mountain range might as well have been on Mars.

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## CHAPTER IX

### *An Account Settled*

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CRIMLY the two pilots plodded on, laboriously, almost hopelessly.

"There must be some way to get a rest!" Adams protested at last, stumbling forward on leaden feet. "I can't stick this out much longer. I have just got to rest a bit. I'm fatter than you, remember, and that makes more to carry. I guess it'll be all right to sit down and only move when the algae become dangerous."

Bruce looked back.

"You're taking the devil of a risk," he retorted. "And I'm not going to join you in it! See you in Capital City!"

With that he resumed his onward journey alone. As far as his eyes could see, the ocean surface was smothered now by these crawling fields. In a few more weeks at the most, the ocean would have disappeared. And this raised another problem to Bruce's mind. The displacement of such a vast body of water would be bound to force it elsewhere. Over the land? Over Capital City, perched as it was on Manhattan Island? He had many grave warnings to tell Lincoln Bax once he reached him again.

Doggishly he still went on, his legs aching and numb. The algae was difficult stuff to walk on too, for it dragged back each time with something of the clogging quality of wet sand.

At a new sound—a glorious sound—he looked up. There was the throbbing of an airplane engine and with it the twittering crescendo of thousands of excited birds. Pausing, he sighted the plane diving swiftly from out of a fast moving black cloud. He recognized the cloud immediately as being created by birds—a swarm of them comprising tens of thousands. He'd encountered six such swarms himself on his recent flight, each one bigger than its predecessor. The skies were getting infested with birds, and they were a deadly menace to fliers.

Bruce stood marking time as he watched. Then as the plane twisted round and headed towards him he ripped the chest and sleeve from his already torn shirt and waved it vigorously. Just as he saw the plane bank steeply towards him, a faint cry for help came to his ears.

Wheeling round he beheld a sight that sent horror knitting into his heart. Half a mile or so away Joe Adams was waving an arm frenziedly as he lay full length in the smothering algae. In a flash Bruce guessed what had happened.

Worn out by his efforts Adams had obviously sat down and fallen asleep! Now death threatened him.

Bruce was galvanized suddenly into activity. He began to retrace his way as fast as he could. But long before he arrived anywhere near his unfortunate friend, he realized he could never make it. Before his very eyes the crawling stuff was mounting and spreading. It engulfed the arm and then the head.

By the time he reached the spot Bruce was faced with the grim sight of a higher mound of algae than elsewhere—and that was all!

Sweating, reviling the stuff crawling over his heavy boots, he turned as the plane he had signaled came bumping and bounding along over the uneven surface.

"Hang on as I go past!" roared the pilot's voice through the external speaker. "Can't stop in this treacle!"

Bruce obeyed, dived for the machine as it swept by him, found himself borne into the air with his hands clinging to the edge of the wing. A few minutes later he tumbled into the cabin, fell into the seat next his rescuer and began to drink greedily from the water bottle which was handed to him.

"Thanks," he panted, returning the bottle. "I needed that."

The pilot smiled rather gravely. He was a tough, wiry-haired fellow with a square jaw.

"Thompson, coastal scout," he said briefly. "You're Bruce Cranley, aren't you? I've seen your face in the aviation slicks. Say, am I crazy, or did I really see somebody being swallowed up in that muck down there just now?"

"You're not crazy," Bruce rubbed a hand over his bewildered face, and gave a little shudder. "That was my co-pilot, Joe Adams. I was idiot enough to let him rest and I guess he must have fallen asleep. The algae got him. It was the most horrible thing I've ever seen, him being swallowed up like that."

"Yeah," Thompson muttered. "I know this stuff is dangerous. That's why I didn't dare land and stop. How come you got into the soup?"

"Crack up."

"Birds?"

"No, fire. And I don't know why."

**T**HOMPSON was silent for a while, piloting swiftly over the wastes.

"Lucky for you those birds chased me off my course," he said at last. "I'd never have spotted you otherwise."

"Drop me at Capital City airport," Bruce said, and became quiet, exhausted by the ordeal through which he had passed. He closed his eyes and tried to relax, only to open them again when Thompson spoke. Thompson was puzzled.

"Where the devil is the airport? The landmarks are all changed since I took off this morning. I'm following the beam, but that doesn't help much."

Bruce stirred wearily, irritated by the man's apparent lack of skill. But as he gazed out of the port he gave a violent start. The normal landmarks had indeed disappeared!

Where the great Central Park of the city had been there now sprawled a mass of green, utterly unrecognizable as the former neat, orderly square. The distinctive trees at different parts of the city had become up-thrusting green giants, towering to immense heights, their vast branches jutting out so far that they seemed to be about to embrace the lofty pedestrian ways.

Yes, everything was changed, especially so to Bruce who had been away several days. Apart from the riot of outflowing green from the park in the city center there were also evidences of similar leafy tentacles spreading in from the east where lay the pastoral and agricultural regions.

As the airplane swept low over them, Thompson anxiously searching out the way, Bruce caught a glimpse of men working amidst the crops, men utterly dwarfed by the titanic waving heads of corn and barley around them!

Thompson gave a sudden yelp of alarm as an avenue of brushy giants, which had formerly been bushes lining both sides of Central Boulevard, loomed abruptly in front of him. He pulled back on the stick and soared over them in the nick of time.

"What's gone wrong here?" he panted, turning a sweating face. "Looks to me as though Capital City is in the process of being smothered!"

Bruce had grown worried. "Yeah. And there's the airport down below. The landing runway looks kind of cracked up but you'll make it okay."

Thompson nodded and huddled himself over the controls, lowering the machine gently. While they skimmed along the runway they both saw that its cracked appearance was caused by thick, rank grass having forced its way through the weakest parts of the transite metal.

Bumping and bouncing they taxied to a halt.

"Thanks a lot," Bruce said gratefully, pushing the cabin door open. "Be seeing

you again maybe. Right now I've got to find out what's wrong with the vegetation."

He hurried over to the airport headquarters, made out a brief report of his accident assigning the death of Joe Adams to a forced landing—hurried to the Administration Building. It took a long time. Here and there along the traffic route men were busy cutting or blasting aside tenacious green stuff crawling over the paths.

When he finally reached Bax's headquarters, Bruce found the anterooms filled with eagerly talking people. He did not wait to be announced for he felt conspicuous in his torn and dirty flying togs. He went right into Bax's office and found him standing by the window, bearded chin on chest, hands locked behind him.

"Why, Bruce!" Bax looked round in pleased surprise and came forward with extended hand. "Am I glad to see you again, my boy! Say, you look a bit the worse for wear. Here, sit down."

Bruce settled down into the chair and asked a question.

"Did you think I'd lost my way with all this green stuff smothering everything?"

"No, not that." Bax looked at him somberly. "I've been afraid of Eberhart carrying out his threat to kill you."

Bruce jumped up again. "Why would Eberhart wish to kill me?"

"Spite—nothing else. He's a changed man. Listen to this while I tell you."

Bruce listened, his face darkening. At the end of the story he slammed his clenched fist on the desk.

"So he's to blame! Because Freida did the right thing and told you everything, he decided to hit at me. The reason why I'm in this state is because the plane caught fire in midair and we had to bale out. My co-pilot Adams is dead, sir. He got trapped and smothered by the algae which is choking the seas."

"Yes." Bax's voice was sober. "I've heard the algae is pretty bad."

"Pretty bad! You don't know the half of it! You asked me to look out for any changes I might see. I've seen nothing but them! And when I landed back things were so altered my pilot could hardly find the way in."

Bax rubbed his head. He was anxious.

"All this sudden onrush on growth has occurred within a few hours, just as though a sudden point in evolution has been reached—a mutation like that affecting the dogs, remember—and all plant life has decided to spurt forward to gargantuan size. This vast increase has happened since early morning."

"Then something's got to be done about it—and quick!" Bruce declared. "From what I've seen on my way here all Manhattan Island and Capital City with it is going to be

smothered within a few days. Land, sea, and air is full of life. We've got to find some means of destroying it."

Bax shrugged. "How? Eberhart is the only one likely to be able to suggest anything, and for that he'll have his price."

"Rulership?" Bruce asked grimly, and Bax nodded.

"Well, he's not going to get it!" Bruce slammed his fist down again. "He's not entitled to squeeze us for everything he does. Maybe I can talk some sense into him, sir. I owe him a reward for trying to kill me, anyway. It's worth the attempt. I've got a pair of mighty persuasive fists when it comes to a showdown."

BAX smiled faintly. "All right. Why should I try to cramp your initiative?"

At the door Bruce paused and glanced back. "You say Freida is nursing in the city? Do me a favor, sir. Have her come here while I'm seeing Eberhart. When I get back you can marry us as we planned."

"I'll do that. Oh, and one other thing. Bruce, Eberhart won't know that you're on the way. Since hearing about his microphones, I've had them ripped out of every important building."

"That's the way I want it."

Bruce grinned, and went on his way.

Bruce paused only long enough to call at his apartment for a wash, change of attire, and refreshment. Then, fully fortified, he set off again. On reaching the laboratory, he was shown into the room where Eberhart usually worked—and without a prior announcement by the clerk.

"Well, what is it?" asked the scientist.

When he saw his visitor he gave a violent start.

"Unexpected, eh?" Bruce asked dryly, moving forward. "If it's any consolation to you you managed to kill my co-pilot when you burned up my plane. I'm here—for a settlement."

"What are you talking about?" Eberhart asked coldly.

"I'm talking about murder, microphone eavesdropping, the discharge and frame-up of an innocent girl assistant, and your efforts to depose Bax and to put yourself in his place."

"If you've come to make trouble—" Eberhart broke off nervously, as Bruce removed his coat and tossed it aside.

"Suppose we get one thing straight, doctor," Bruce said slowly. "In Bax you deal with a man who is quiet, tolerant, and disinclined to bloodshed—since the Change. In Freida you dealt with a clever, sensitive woman afraid of your powers. But in me you're dealing with a tough aviator with a good pair of fists and a complete contempt

for your scientific threats! I'm going to beat the ears off you, Eberhart, unless you promise me one thing—and I may still do it even then."

"You insolent young idiot!" Eberhart exploded. "Do you think for one moment that I fear you?"

He got no further. Springing across the room, Bruce seized him by the throat and left wrist, forced him backwards against the bench.

"I'm going to do the talking, doctor. Your job will be to tell me what I want to know. I can break either your neck or your wrist whenever it suits me—so tell me what must be done to stop this growth that's spreading everywhere. There must be some solution in that bulging head of yours!"

Eberhart wriggled savagely, relaxed, then with a sudden vast effort tore himself free. Reaching behind him he yanked up a heavy glass testing bowl, but he never got a chance to use it. A left hook to the jaw sent him tottering backwards. Another slammed him dizzily against the wall, his mouth salty with blood. He shook his head violently and stared at the blurred vision of Bruce's merciless face.

"I'm not here to play games, Eberhart. I want information!"

"This—this is primeval!" Eberhart panted, straightening up and drawing the back of his hand over his reddened lips. "Beating a man up belongs to the old days!"

"Yeah. So does murder, but you still practise it! Come on, you're wasting time! What's the remedy? And for your own sake you had better be honest about it."

"The only solution I know of is acid and explosive to be rained on the vegetation, and guns for the birds," Eberhart snapped. "Make the law of Natural Selection operate again by destroying as much surplus as possible."

Bruce reflected, then nodded. "Yes, I guess that is about the only remedy. I'll suggest it to Bax. And don't forget, Eberhart, that if you try any more funny business with either me or Freida—or Bax—I'll come and get you for certain. I don't quite know what's turned you into a devil like this, but I can answer back in the same fashion."

Eberhart smiled crookedly, dabbed at his cut lip.

"These violent heroics may have relieved your feelings a little. Cranley, but in the end we'll see how much good it has done you or that spying, treacherous woman you hope to marry—"

Bruce was picking up his coat. At the slur on Freida, he turned and his rage exploded. Out went his right fist, into Eberhart's midriff. The scientist doubled up in anguish, only to straighten again sharply as a bone

jarring smash under the chin lifted him clean off his feet.

He spun backwards, made a desperate effort to save himself but missed. The force of the punch sent him slithering across the bench with glass racks and test tubes splintering all around him. Bleeding profusely, with his senses reeling, he dropped to the concrete floor.

"Sorry I can't do more," Bruce said curtly. Savagely whipping on his coat, he turned and left.

## CHAPTER X

### *Attack and Failure*

FIFTEEN MINUTES later Bruce was back in Bax's office. His belligerent mood lightened somewhat at the sight of Freida, pale but expectant, waiting for him.

"Bruce!" she exclaimed in delight, and he caught her up in his arms for a moment. "Oh, thank heavens you're safe! I was scared when I knew you'd gone over to see Eberhart."

"Forget it," he said with a smile, setting her down again. "I can take care of myself. I had a scrap with Eberhart, sir," he went on, looking at Bax. "I gave him a walloping and made him suggest a way of curing this multiplying life. He says acids and explosives for the vegetation and algae and guns for the birds might cure the trouble."

"Somehow I can't picture Eberhart giving the right answer just because you beat him up," Frieda remarked dubiously.

"Perhaps not, but it is worth trying. Anything will do as long as we keep a headstart on him. One big victory on his part and he'll never let us catch him up. As a matter of fact, I knocked him around a lot just for the fun of it. He's turned into a perfect swine these days and needed a beating."

There was silence for a moment, then Bruce smiled and fished a form out of his pocket. He laid it down on the desk before Bax.

"Here you are, sir—permission by the Eugenics Council for Freida and me to marry. The rest is up to you."

Bax nodded, studied the two young people arm-in-arm before him for a moment, with a smile he got to his feet and performed the brief ceremony. At the end of it he stood in silence as they embraced. Then he fetched a deep sigh.

"Is it that bad, sir?" Bruce grinned.

"I was only thinking what a tragedy it is that two fine young people like you should be born into an age like this! An age of sterility, danger, too much power in the



hands of an ambitious scientist. Maybe I'm selfish. Perhaps Eberhart should rule after all."

"That is sheer nonsense!" Bruce declared. "Isn't it, Mrs. Cranley?"

"Definitely," she agreed, nodding her blond head. She looked at Bax as he rubbed his chin in a worried manner. "Don't ever think that way again, sir! We're on your side, and so are the people, now you've cured them of their illness. We'll crush this opposing life somehow."

"But we're not going to do it standing here talking!" Bruce interrupted her. "Free, you'd better get back to your nursing right away. I'll gather all the pilots I can find and see what can be done with acid and explosives. I'll see you the moment I get back."

Freida nodded. They kissed again, and she hurried from the office. Bax pressed the button on the general call microphone.

"All pilots report at once in Briefing Room One for special orders," he intoned. He repeated it, then switched on to the Briefing Room itself. "Commander Blair? Get all supplies of corrosive acid and atomic force bombs you can right away. You'll find them in the underground storage rooms amongst the supplies retrieved from the war. The matter is urgent and must be done immediately. Flight-Commander Cranley will be with you with full instructions shortly."

Bax switched off and Bruce nodded.

"Thanks, sir. You might give the people warning to get off the streets to the underground. Now I'll be on my way."

"Best of luck," Bax said earnestly. When Bruce had gone, Bax's eyes strayed to the vision outside the window.

Green—nearly everywhere. In the early evening light Capital City was taking on the appearance of a gigantic ivy-clad castle. A mammoth branch with eighteen-inch wide leaves even now was snaking under this lofty window.

Bax turned as the radio buzzed for attention.

"Harbor Sixteen calling headquarters! Shipping unable to approach because of blocked water. Three vessels a mile out from shore sunk by fast growing white fields. Instructions please."

"Stand by for further orders," Bax replied. He opened up the microphone for the general public speakers scattered throughout the city.

"Friends, this is Lincoln Bax. Again our city is faced with unexpected danger through the short wave radiation from space which Dr. Eberhart explained to you recently. Trust me as you did during your illness and all will be well. Take shelter in the underworld for the next few hours while our air-

men set about the task of trying to blast this life to pieces."

HE SWITCHED off, worried and puzzled. As he glanced through the window again, he could observe about two hundred airplanes, all fighters, starting off from the central airport.

"If only I didn't feel so certain about my premonition," he muttered. "If only I could laugh at this certainty of defeat! For defeat and failure it will be unless there's a change. This time the gods don't seem to be favoring me with a grand inspiration!"

\* \* \* \* \*

Bruce Cranley, in command of the two hundred planes detailed to destroy the vegetation, cruised around for a while high above the city until he was sure that everybody down below was out of danger. Then he opened up the microphone.

"Okay, boys, go to it! Our first job is to destroy the center of Central Park. Dump everything you've got into it. If we can destroy the heart of the greenery, root and all, the rest will die soon. I'll lead. You others follow."

He leveled the machine's nose, crossed the green target, nodded to his co-pilot, and pressed the bomb release. The first shower of atomic force explosives landed with shattering effect and sent disintegrating vegetation upward two thousand feet.

That was the beginning. For the remainder of the summer evening a continued savage air assault on the stuff continued, intermingled with frequent gun attacks on the clouds of birds which came sweeping down from the heights. But gradually Bruce was forced to realize that it was all useless endeavor. The birds were too thick for even protonic guns to thin them much—and as for the vegetation and harbor algae, it seemed that each shattered piece took root and multiplied. Probably Eberhart had known that, for the end of the attack left the masses of greenery and algae far thicker than they had been before, and growing fast.

"No soap," Bruce grunted over the mike to his co-pilot. "Okay, boys. Return home."

He sat watching moodily as the planes wheeled back toward the base. As he prepared to follow something prodded him in the side.

"No you don't, Cranley! You're not going back! Start taking this machine out to sea—and quick!"

Bruce looked sharply at the snarling face of his co-pilot. For a moment his eyes dropped to the automatic in the man's hand.

"I get it," he said slowly. "Working for Eberhart, eh?"

"You guessed it, feller. He told me to see that you never returned from this job and

you're not going to. Bax bragged you were to be in command, remember. Go on. Keep driving."

Bruce tightened his lips and obeyed. Though he knew Eberhart had agents everywhere, he had never suspected that his co-pilot might be one of them. Steadily he flew away from the city, crossed the algae-choked harbors, and finally came out over the caked, white-strewn sea with its jammed, motionless ships.

"How much further?" Bruce snapped.

"Far enough for your corpse to be lost. When I chuck out your dead body I want to be sure nobody finds it!"

Bruce's eyes narrowed. Suddenly he whipped the machine into a steep bank. The loss of balance flung him and his companion sideways. As Bruce quickly righted the machine, he snapped in the automatic pilot and, with a downward jab of his left hand, knocked the gun from the other's grip.

Instantly the two men were at each other's throats, the plane roaring onwards on even keel. There was no mercy in Bruce's heart. This scoundrel had meant to kill him.

Like a wild animal Bruce Cranley rained sledgehammer blows into his enemy's face and body, knocking him off the seat and onto the floor. The would-be assassin hit back with all the strength he could muster. The blow knocked Cranley against the dial-board, disarranging the controls. The plane lurched violently. The men continued to fight but Bruce had time to notice that the algae-field was sweeping up to meet them. This meant the automatic pilot wasn't working, that they were heading rapidly toward the sea.

**B**RUCE warded off a blow and threw in a knock-out punch. But another lurch of the plane upset his calculations and instead of delivering the knock-out he received it, with a violence that made his head swim.

Dazed, he went tumbling backwards into the cabin door. Under the impact the lock snapped and he went tumbling into space, plunging in the longest dive he had ever made, into the sea between two algae-fields.

The shock of the water revived him. With an effort he struck out for the algae-field. A sudden rending and tearing noise not far away, caused him to look back. The plane had landed on the field. The ship slewed around and screeched to a halt. Bruce waited, struggling in the slimy water. He expected something in the nature of a bullet—but nothing happened.

At last he clambered out onto the field, shook the mites from his tattered clothes and went forward slowly. He was ready for a trick, but the treacherous co-pilot kept out of view. When Bruce reached the plane

he found out why. His attacker lay on the floor with a broken neck.

Reaching inside Bruce dragged out the corpse and threw it into the all consuming algae, and scrambled back into the driving seat. There was just a chance he might pull away before the machine became too firmly rooted in the algae.

The motors roared as he pressed the switch. A wing was damaged and the propeller was out of alignment, but it was worth a try. Slowly, creaking huskily, the machine tore free like a fly escaping from sticky paper.

Bruce heaved a sigh of relief and climbed swiftly, glancing down once in the dying light at the white and black mound where his former adversary's body was fast being swallowed up.

## CHAPTER XI

### *Eberhart Takes Command*

**N**OW for a third time Dr. Eberhart straightened up from before the microscope and gently caressed the bandages on his right arm. Beneath them were deep glass cuts, the result of his fall after Bruce Cranley had delivered that final uppercut.

"This is indeed a misfortune," he muttered at last. "It means that my recent condition of conscienceless progress is coming to an end! Very shortly those emotions known as sympathy and humanity will return, and my ruthless ambition will be blunted! I wish to heaven I had the heart of a robot."

Once more he peered at the slide. There was no longer any chance of a doubt. That drop of blood drawn from his arm was almost devoid of the virus he had received from the dog-bite and, as he well knew, the reversion to normal bloodstream meant the end of that queer pathological condition under which his advancement at the expense of all else had held such a fascinating appeal.

The reason was clear. He had lost a good deal of blood from the glass wounds. Twinges of remorse afterward for some of the things he had done recently had worried him, led him to a diagnosis. Now he had learned the reason.

"Action," he muttered, making up his mind. "Action is needed before the virus is neutralized entirely. As my normal self I might lack that extra ounce of ambition necessary to oust Bax."

He turned and put on his coat. A short journey across a city, slowly refilling with people after the abortive attack on the encroaching growth, brought him to Adminis-

tration Building. He went straight to Bax's office and found him gazing out of the window onto the confusion below.

"You didn't come here for any good purpose, Eberhart," Bax said, turning around. "What do you want? To gloat over the fact that I can't master the mad life gnawing at my city?"

"I don't waste my time gloating, Bax. I have the real cure for all this, not the one I told that impulsive young fool Cranley. But it'll never be used unless you step down from power. I'm offering you a dignified retirement. If you refuse to step down, I may have the people throw you out. This is no time to wait for inspirations." Eberhart chuckled mockingly. "Hour by hour Capital City is being overwhelmed. Other cities throughout the world are suffering the same way. I can save humanity and only I know how."

Bax drummed on the window ledge with his fingers. He shook his head.

"I still see no reason for relinquishing my leadership. If the people trust me enough they will hide in the underworld until I have worked out the solution to all this. I'll find it, given time. The gods can't be hurried, Eberhart."

The scientist tightened his lips. "Bah!" he snapped. He pondered for a moment.

"Have you the courage to put the trust of the people to the test?"

Bax's blue eyes swept him.

"You talk to me of courage? Any test you can name!"

"Good!" Eberhart picked up the microphone from the desk, switched on the public speakers, then went out onto the balcony, motioning Bax to follow him. Side by side they looked over the rooftops for a moment. Lights were springing up like jewels in the twilight.

"People of Capital City!" Eberhart cried, and his voice boomed like a giant's in every quarter of the metropolis. "An issue is at stake which only you can decide."

Down in the brilliant streets, the people began to form into black masses, listening.

"Unless this encroaching life is destroyed immediately Capital City will be choked," Eberhart shouted. "Already the harbors are jammed, the seas flooding over onto the land, the skies thick with flying life. Around you, your homes, places of work, and means of transport are being torn to pieces by devouring life. Do you want it stopped?"

A roar of assent floated up like a massive cord on an organ.

"Or," Eberhart went on, "do you prefer to wait until your leader, Lincoln Bax has

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an inspiration, an inspiration which he himself admits may be delayed for a long time. Until he has it, you will be forced to retire underground to await the outcome of his genius!"

"No!" The anger of the shout was unmistakable. It was repeated even more loudly. "No! No!"

"In order to end this chaos, you must appoint me ruler in Bax's place. Bax has agreed to abdicate. Here—he will talk to you."

**B**AX moved over to the microphone.

"My only wish is for your happiness and welfare, my friends. Make your own choice."

"Eberhart!" The scientist's name came floating up out of the city. "Give us Eberhart!"

Bax relaxed a little, stood gazing down. Whatever pangs he felt at the relinquishment of rule did not show in his majestic bearing or strong, bearded face. He turned away at last, back into the office. Eberhart followed him.

"You know," he said slowly, "I only just managed it in time."

"Oh?" Bax was busy putting his papers into a bag.

"It concerns a little matter of a dog bite and virus—too complicated to explain to a man who isn't a scientist."

"I take it you mean that the poison which has made you so brutal lately, is nearly worked out of your system?"

Eberhart looked up sharply and met Bax's steady eyes.

"The gods told you?" he questioned dryly.

"You can attribute it to that. What I don't know I am often told. I didn't mind fighting the old Eberhart, you know. It's easier dealing with the hard shell of a man you've been recently. I'm ready to forget it, but I can't answer for Bruce or Frieda. They have every reason to be bitter."

Eberhart was silent, lost in grim reflections. Then he gave a glance of surprise as he saw Bax's hand extended towards him.

"You actually want to shake hands with me?"

"Why not? Each, in his own way, has the city's interest at heart. Time will show which of us the people prefer."

Eberhart shook the hand hesitantly. When Bax reached the door with the bag in hand, he called a question after him.

"Where do you plan to go?"

"The underworld. Maybe a few loyal followers will accompany me. I'll probably take Frieda with me. She'll prefer to go along. I'm sure of her."

The door closed behind Bax. Eberhart stood thinking for a moment. He turned to

the desk and began planning how to save the city as he had promised.

Two hours passed. As night settled down, Eberhart continued to work steadily at the desk, covering sheet after sheet with diagrams and notes. For the first time in weeks his brain felt clearer, filled with a keen, calculating fervor instead of that grim, cruel ambition to succeed even if he had to destroy. But whenever his concentration wandered for a moment, he had many qualms of conscience. In particular he thought of Bruce Cranley and the order he had given for him to be slain. Then he shrugged to himself. After all, he had not been altogether accountable for his actions at that time.

It was midnight when his planning was finished. He pushed the papers on one side and took two tablets from the phial he fished out of his pocket. They would guarantee that all need or desire for sleep would be banished. He pressed the switch on the main loudspeakers.

"Calling all engineers and electricians!" he said into the microphone. "Report at once to Administration Building for special consultation. This is urgent!"

He switched off again and settled to wait, idly surveying his diagrams. At a slight sound behind him he turned sharply. His surprised eyes settled on a ragged, dust-stained figure coming through the open window from the balcony, service revolver in hand. The light from the shaded desk lamp cast on his white, harshly set visage.

"Bruce!"

Bruce paused a second, rather puzzled by the use of his Christian name. Eberhart had used to call him by it, of course, in the days before he'd got big ideas. With inward censure at his lapse, Bruce came on again, stopped beside the seated scientist and kept his gun trained on him.

"Yes, Bruce Cranley! That tree outside was pretty handy for getting in here unobserved. I've heard all about you taking Bax's place. I'm going to kill you, doc, and risk the consequences. I warned you what I'd do if you ever again tried to wipe me out."

"Wait a minute!" There was something in the serious urgency of Eberhart's tones which made Bruce pause. "Let me speak first. Believe me when I say I'm genuinely glad that you are safe and sound. It means I haven't your death on my conscience after all."

**W**ITH a harsh, laugh Bruce moved closer. "Conscience! You haven't got any!"

"I hadn't until now, I admit. But that came from the effect of a toxic, a dog bite poison. It's gone now. I'm the old Eberhart

you've always known and I'm sorry for all I've done to you and Frieda. I was out of my senses for the time being. As there's a God in heaven, Bruce, that's the truth!"

Bruce looked at him steadily, searching his mind. He could certainly see a decided change in the man. He even believed him, but he did not want to appear ready to admit it.

"You got yourself elected as ruler, I notice."

"By popular acclaim, and from sheer necessity. Bax has gone to the underworld and probably has taken Frieda with him. I need you, Bruce. I need all men with strength and intelligence. We've got to save Capital City from ruin. The engineers are on their way now to hear my plans. Forget our differences, at least for the time being, and work with me."

Bruce slowly put his revolver away.

"Very well," he said quietly. "I know the city is in a mess and I'm prepared to help save it. But if you pull anything, it'll be just too bad, that's all. My allegiance is still to Lincoln Bax. I'll never recognize you as my ruler."

Eberhart shrugged. He turned as the office door opened and a small group of men, the controllers of the city's light and power under Eberhart's direct orders, came in.

The scientist rose and motioned them to chairs. Soon they were seated in a half circle in front of the desk. Bruce sat down too, prepared to listen, but wary just the same. Then he caught the curious looks being cast at his disheveled appearance.

"Flight-Commander Cranley has just had a brush with the devouring vegetation," Eberhart said briefly. "And it is to hear my plans for crushing it that I summoned you here. The cause of the growth—both vegetation and algae—is that each cell is in itself alive, and therefore an entity. So severing any particular part makes no difference because the severed part by reason of its independent cellular makeup grows again. The only way to destroy it, oddly enough you'll think, is by ultrasonic vibration. Experiments before the war, and my own research recently, has proved conclusively that inaudible sound utterly destroys cellular life by agitating the atomic aggregates so violently they can no longer hold together. Total collapse follows. That is the plan we are going to follow."

Eberhart turned to the drawings on the desk.

"Here are the designs of the machines you will build. There will be six mounted on tractors—six projectorlike machines. Ultrasonic vibrations will be directed at the vegetation as the tractors move along, and will destroy it root and branch. For the sea-

algae and bird life six more projectors will be attached to airplanes, and used in a similar manner after the fashion of a gun. You, Cranley, will take charge of that."

Bruce nodded slowly. So far, so good. If, as seemed likely now, Eberhart really was making a determined effort to save Capital City, Bruce was willing to shoulder his share of the job.

Eberhart picked up a set of diagrams and handed them to Beamish, the chief engineer of the group.

"Here you are, Beamish. Have photostats made immediately and tell the various firms concerned to start work at once. Drop all other projects. Every second counts now. Inform me the moment you are ready. I will televise a set of diagrams to other cities so that they can follow the same procedure. Mass attack by scientific methods is the answer to our problem. But you've got to hurry!"

"Right, sir," Beamish nodded. In company with his fellow engineers, he turned and left.

Bruce remained seated, waiting. Eberhart pushed another set of diagrams over to him.

"I'm relying on your full cooperation in the aviation side of the problem, Bruce," he said quietly. "Get photostats made, supervise the work yourself, choose your own planes and the best men you know. You have carte blanche—but for heavens sake get every scrap of speed you can out of your workers."

Bruce picked up the plans, folded them, put them into his pocket.

"Very well, doc, I'll do as you wish. But if and when we get the city freed you'll have to excuse me for going back again to Bax and helping him return to power."

Eberhart smiled glumly. "Suppose we save the city first—and then discuss it?"

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## CHAPTER XII

### *Metamorphosis*

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**DURING** the next few days Bruce Cranley was busy carrying out his task. When he was assured that everything was going ahead as rapidly as possible, he made it his business to search for Frieda. He did not find her, but she had left a letter for him at her apartment in which she announced her intention of accompanying Bax into the underworld. After collecting a hundred or so followers, who preferred his rule to Eberhart's no matter what the consequences, he had sought seclusion and safety below, cut off from all contact with the city above.

Bruce toyed with an urgent inner desire to

dash off after his wife and explain what he was doing, but he decided against it. There was not enough time. The underworld was a complete city within itself, covering many acres where there were stored provisions, grain, agricultural produce, the ores from the mines, and the homes of the industrial and mining workers. There were factories too. In planning Capital City Bax had deliberately shifted all industrial eyesores below out of sight.

It would require days to go down that two-mile shaft, hunt out Freida, and get back. Besides, he might be needed at any hour. The only thing to do was hope for an early end of the battle with the growths. Freida must wait until then.

Putting thoughts of her out of his mind, Bruce hurried the engineering and assembly firms all he could. He realized the desperation which was gripping the city's inhabitants. Time was the chief obstacle.

On each succeeding day he was faced with evidences of the slow paralysis which was creeping over the city. Though equipped with the very latest tools, gangs of men found it impossible to keep the traffic and pedestrian ways open. Finally vehicular traffic stopped altogether, some of it jammed in the midst of leaves and branches. The buildings themselves were coated in green from top to bottom, the branches forming interlacing bridges and nets between them. It was fortunate that the buildings were made of transite, for probably no other material could have stood up to the strain.

There were other dangers rampant now. Tidal engineers reported that with every hour the steadily rising water from the Hudson and Delaware rivers was threatening to overwhelm Manhattan Island, as the algae forced the sea higher and higher from normal level.

Jammed ships and traffic, urgent pleas from other cities, darkening clouds of bird life in serene pale blue skies—all these things Bruce saw and worried over as the engineers toiled on.

At last the projectors were ready. The tractor machines were all set to start from the shops and the planes from the assembly fields, kept clear at the cost of superhuman efforts.

Eberhart was immediately advised and summoned Bruce and chief engineer Beamish to his headquarters. For several minutes he gave them exact instructions regarding the handling of the projectors, arranging for television link up to keep check on their activities. Suddenly, in mid-sentence, he broke off and stared at a corner of the office ceiling.

"What the devil!" he muttered, and switched on all the lights. The window was

blacked out with vegetation.

"Only a crack, sir," Beamish shrugged, looking. "You were saying?"

"Whoever heard of a crack in transite?" Eberhart demanded, then he swung round at a creaking, tearing sound in the corner behind him.

Astounded, all three men gazed fascinatedly as a fissure zig-zagged down the length of the opposite wall. It split into branches and a seam opened in the other side of the ceiling. Soon there was a new sound—a deep humming note which presently crept up the scale until it was like a fast revolving flange rubbing against a piece of steel.

"Look!" Beamish shouted suddenly, and pointed to the desk.

It was shivering, glowing weirdly with a million veins of subdued color. Its massive transite legs suddenly quivered, cracked, then literally flowed onto the carpet, letting the heavy top crash down in a litter of papers and overturned instruments. The top, too, shimmered like something out of the spectrum, melted into a gummy mess which slowly hardened like a lava round the paraphernalia in its midst.

"Earthquake!" Beamish gulped, jumping at the obvious conclusion. Quickly he amended it. "No! The plants must be tearing the building down!"

Eberhart shook his head quickly. "You're wrong on both counts, Beamish. I've been afraid of this happening. That's why I said matters were so urgent. It's the very devil it had to happen now, before we can kill that other life."

He paused, watching the opposite wall as it became suffused with color.

"Mutational change," he snapped, with a glance at Bruce's tense face. "We've got to get out quick! Transite, being element Ninety-three, is unstable. Now, like everything else, it has reached a mutation point and is changing—probably into lead. It's that blasted short wave radiation at work again. Come on, while we're still able to move!"

All three sprang for the door as the opposite wall flooded itself with color, twanged and creaked with the noise of its change, then began to smear and dissolve.

Out in the corridor Eberhart paused for a moment and looked anxiously about him. The whole building was filled with sound—the running feet of the staff, their alarmed cries, and above it all the deeper significant murmur of the dissolving metal.

"Our only chance is to try and get to the underworld," Bruce said breathlessly. "It should be safe enough down there."

They raced down the quaking corridor. Beamish turned and dived for the elevator.

"Come back, you fool!" Eberhart roared. "You'll never make it!"



THE scientist broke off, appalled at the accuracy with which he had foretold the danger. Jammed to capacity the elevator gave way at that very moment, flowed into glowing jelly and dropped its screaming occupants down the vast shaft.

"Jeepers!" Bruce whispered, sweating, as the floor shifted under him. "We'll never get as far as the ground floor even with the stairs. The whole place is caving in."

"The window!" Eberhart shouted over the din. "If we can reach the trees outside we might make it!"

He whisked up a transite chair even as it was beginning to glow and hurled it through the glass. Within seconds he had scrambled out onto a swelling arm of the vegetational cobweb that was stretched between the collapsing buildings. Bruce dived after him immediately. Neither of them had any time to spare for the Administration Building just sloughed and melted away even as they vaulted from it.

Buried in the greenery, hanging on for dear life, they were pitched up and down helplessly as the tough branches and tendrils tore free of their hold and went crashing down. It was a wild, unearthly fall for both of them, accomplished in complete darkness.

For one thing the sky darkened to midnight gloom outside and the city lighting had failed. Even if there had been any, it was unlikely it could have penetrated the dense vegetation. For both of them the fall ended in a violent bump and left them buried deep in leaves and branches. From outside came the weirdest of sounds—the whispering creak of the crumbling city, the moaning of a fast rising wind, and remote concussions which might have been either atomic bombs or thunder.

"Okay?" Bruce called.

"Yes, I'm okay," Eberhart was not far off, though hidden. "Let's find the way out of this cursed stuff!"

But it took them a half hour of struggling and driving through the labyrinth to escape, only to undergo another horrible experience.

A wind of terrific force, the first wind they had ever known since Capital City had been built, smote them with blinding impact, knocked them reeling. When they faced it again they saw things which left them stunned and amazed.

Capital City had almost completely collapsed. The few buildings that remained were smearing like sand castles before an ocean tide, crumbling, melting away in great slabs of multicolored light. Overhead the sky was a tumbling riot of dense black nimbus cloud, edged with blinding flashes of lightning which spasmodically illumined the awful scene.

"The climatic machines must have gone,"

Eberhart said grimly. "Quite a sad end for transite, eh? And it was such a glorious metal too."

"Look!" Bruce yelled, pointing. For a moment a purple blaze of chain lightning revealed the distant harbors. Rolling in from them, high over the solid clifflike masses of algae, came a tidal wave, forced in on the island by the jammed ocean and unguessable fury of the wind in those open spaces.

Even as the two men watched they saw it spreading in mounting fury, smashing flat the few skeleton remains of transite, tearing away the green life, boiling and swirling onwards in a thundering flood.

"Run for it!" Bruce cried. "If we don't reach that underworld, we're finished!"

He caught the scientist's arm and they went floundering side by side through the squirming green plants littering their way. Deep beneath it the transite had hardened to the consistency of lava, its mutation complete.

It was two miles across the waste to the underworld valves. Half a mile against blinding rain and hurricane wind brought the two men to the survivors of the catastrophe, all evidently imbued with the same idea. In droves, men and women were struggling along, some falling, others trapped and dead in the vegetation. Some had been struck by lightning. Others were rooted helplessly into the solidified transite and awaiting their doom.

NOW, amidst the chaos, Eberhart was suddenly recognized. The news spread like wild fire among the survivors.

"Eberhart!"

"He's here, with us, running for safety!"

"He got us into this mess with his fancy promises!"

"We must reach Bax! He wouldn't have let this happen."

In fact the survivors were in the mood to form a lynching party, so savage and disillusioned were they. But Eberhart paused and faced them, raised his hand.

"All right!" he shouted, over the din. "All right, so you blame me. I couldn't help it, I tell you. It was science which killed this city, not I. Scientific law, I tell you. Kill me for spite if you like, but you'll wish later on that you hadn't. You still are going to need me in the future!"

"Bah! The man we want is Lincoln Bax. We never should have allowed you talk us into letting him go!"

For a moment or two there was an ominous silence among the people. Then the issue was decided for them as the approaching tidal wave smote them with a roar.

A yell of alarm went up and, their personal hatred forgotten, they turned and

surged on again towards the distant underworld valves. Their hurried march soon degenerated into a pell-mell scramble for life, without regard for age or sex.

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## CHAPTER XIII

### *A Way Out*

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**S**WEATING with excitement, Cranley and Eberhart hurried onward, too.

"Guess you had better luck than you deserved there, doc," Bruce remarked angrily, as he and the scientist scrambled over obstacles. "One thing is certain—you've lost your short-lived rule."

"I'll get it back again, once these people understand. They're excited at the moment, a natural reaction. When I get below—"

"If we get below!" Bruce interrupted him. "Take a squint at that! It doesn't look too healthy."

They stopped again amid a blaze of lighting. The giant underworld valves were visible now, fortunately clear of the plasma of hardened transite, but around them, in a solid phalanx, were the shoving, struggling, desperate people.

"We're never going to get underground in time," Bruce said finally. "Any ideas?"

Despite the wind Eberhart swung round and looked back at the chaos caused by the hurtling flood and melted transite. Eberhart found he had no ideas. He could do nothing except wait for the blow. From that tidal wave there seemed to be no escape now.

"Can you swim?" Bruce asked suddenly.

"Yes. Pretty well."

"Okay. Then we take our chance. When the water comes, it will rush down into the underworld, and our one hope is that we may be carried along with it. Shuck your boots and coat. Get ready."

Eberhart nodded. In the few seconds left them they both prepared to swim. When the tidal wave came it loomed up, awe-inspiring, monstrous in the flashing light. The din of its onrush drowned the cannonading thunder. Trees, vines, broken branches, all were churning in its midst.

Bruce and Eberhart were swallowed up in it, crushed down by its awful weight, fighting to get air into their laboring lungs. Desperately they both struggled upwards, ever upwards—

They bobbed to the surface in roaring darkness, found themselves being borne along with hundreds of other struggling men and women down one of the sloping valve tunnels.

"Doc!" Bruce yelled hoarsely. "Hey, doc! You there?"

The scientist's answering cry showed that he was not far away. As light began to flicker upon the chaotic scene he shouted back.

"Bruce, cling onto whatever you can find that is floating. Hold on until the water has spent itself. If you miss there's a two-mile drop which will probably finish us."

Bruce had forgotten this deadly possibility. He shook the water out of his eyes and stared ahead as he was carried along with the current. The end of the main tunnel was near. The edge of the mighty elevator shaft leading below was in view, illuminated now by the two huge self-generating cold-light globes at its summit.

Nearer, nearer, the drop came. The sound of that torrent cascading below was like Niagara in flood. Bruce struck out desperately and missed the framework edge of the great shaft. An appalling chasm, fuming with mist and thunderous noise loomed near by. At this instant he felt an iron grip on his shirt collar and with a mighty effort he was lifted clear of the water and dumped heavily on a huge girder above it.

"Th-thanks," he stammered, as Eberhart, straddling the girder, gave him a rather crooked grin. "First you try and get me killed, then you save my life. You're a strange fellow, doc."

"No stranger than science and cockeyed bacteria make me," Eberhart shrugged. "We're quits now. I've evened up the debt I owed you." He stared at the deluge and people being swept over the precipice like flies. "There'll only be a few survivors from this catastrophe, I'm afraid. And the underworld itself won't be much improved by this flood either."

Bruce nodded silently, and for some time afterward the attention of both of them was fixed as they watched the fury of the water spend itself, which it did in about an hour. Simultaneously the shriek of the elements outside was suddenly silenced as the massive covers to the outer valves slid into position, sealing the underworld completely.

"That's a good sign," Eberhart said, shifting on the girder. "The power houses down below must be working all right. Seems to me we'd better start climbing down. It's useless to wait for the elevator. Come on."

They began to descend the transite ladder running down the whole length of the shaft. Resting occasionally on the giant girders, two hours elapsed before they finished the descent. Then knee deep in fast flowing water, climbing over dead, drowned, and maimed bodies, they finally reached the underworld. Unexpectedly it had not been deluged. The giant sluices and sewage conduits had handled the flood admirably.

**E**BERHART looked beyond the rescue and emergency squads in the immediate foreground to the army of people in the distance under the cold lights, a vast crowd trekking down to the center of the underworld city, survivors like him and Bruce. He turned with a bitter smile.

"Well, here it is," he said dryly. "No way back, and only one way forward. Now we'll join people who are waiting to cut my throat. Looks as if I'll have to throw myself on Bax's mercy. And will that be something!"

When they gained the underworld center, the people were certainly hostile, and Eberhart might have found himself in pretty bad shape but for the intervention of Bax. With his usual serenity, Bax calmed the mob, and assigned rooms in his own abode to both Eberhart and Bruce. For twelve solid hours they slept, and awoke to find good food and drink and fresh attire.

Shaved and washed, they presented themselves in the room where Bax had made his headquarters. Bruce smiled with relief when he caught sight of Freida, seated beside Bax. Jumping up, she threw her arms around his neck in a frenzy of relief.

"Oh, Bruce! Oh-oh, Bruce! My, but I'm glad to see you again! Gosh, was I happy when Mr. Bax told me you were safe. I've been simply wild ever since I heard the city had collapsed!"

"There, there, I'm safe." He smiled, kissing her gently and helping her back to her chair. "Unless I miss my guess I'm going to be down here for a long time."

"Very, very true," Bax broke in, his voice somber. "In case none of you are aware of it, there are exactly two thousand people left in this underworld. On the surface there's not, I believe, a single survivor. I heard from the other cities just before the final catastrophe. But none of their underworlds was as deep or strong as ours, since we were the major city. So I don't think a single soul could have survived. Their last cries for help before the radio went dead were heartrending. I wished I could do something to help them."

"When transite went everything went," Eberhart muttered. "We made a mistake in constructing everything of that metal. Power houses, weather machines, everything just melted away. The whole world—or most of it—must now be covered with a skin of solidified transite-lead several feet thick."

Bax nodded. "Quite correct. Down here is a small replica of your X-ray telescope and I've examined the surface through it. The surface is covered, yes, but most of the algae and plant life has died too."

"That's understandable," Eberhart replied, reflecting. "For one thing the solidified transite would crush the cellular plant life, or

seal down the roots and suffocate them. On the other hand the algae life would be partly obliterated by the terrific electric storms engendered by the breakdown of the climatic machines. But so long as that short-wave radiation pours down on the world's surface, the algae will grow again."

"And down here are two thousand persons with myself at the head, representing the last survivors of Earth," Bax mused. "Sterile! The race of Earthlings is doomed to die because, so far, neither science nor inspiration has come to our aid. We have enough supplies in food, power, and other things, to last us for perhaps twenty years. We have also every scientific necessity. I had many valuable instruments transported down here when I had a vision of what was to happen to Capital City."

For a moment or two there was silence. Then Eberhart asked a question.

"Just where do I fit into all this, Bax? Am I still the naughty little boy in the corner, or what?"

Bax smiled at him faintly. "You're a marvelous scientist, Eberhart, but a poor ruler. Your mass psychology angle is all wrong. I have explained to the people that the catastrophe above was the work of Nature, and nothing else. They believed me. Down here I am the sole ruler and you are the chief scientist, just as it was at first. Actually we four are the Governing Clique. But the fact remains that, without my getting some great idea, I cannot deliver the people from the certainty of death or life imprisonment in this subterranean refuge. To you, Eberhart, may yet fall the honor of proving yourself our deliverer."

**T**HE scientist sat back. A whimsical smile crept across his face.

"Funny how things work out sometimes," he said. "If it were of any use to me any more, I'd still try and wrest power from you. But now it would be folly. Everything down here is so circumscribed. Give me a whole world or it isn't worth the trouble. I guess I'm licked. And you've given me a tough one to solve! I'm just a scientist, not a miracle worker!"

"I thought, perhaps, synthesis," Bax suggested, slowly. "In this condition of non-birth, isn't it the only way to perpetuate the race? You once made synthetic meat."

Eberhart sighed. "Between synthetic meat and living people there is an ocean of difference. Still, at least I can try. I'd like to see what resources you've gathered together, down here, the size of the laboratory I'll have at my disposal."

Bax got to his feet. "I'll show you. And for whatever help you need, call on us or the rest of the people."

Though doubtful about the possibilities of synthesis at first, Eberhart's scientific imagination was stirred by the sight of the fully equipped laboratory Bax's prescience had got together before the surface catastrophe. With some surprise, he also realized he had nothing else to do with his time. So Eberhart applied himself to the problem with all of his customary zeal. He spent hours studying cellular life and slow moving granules and virus under the microscope or through the extra powerful ultra-lens machine. Finally he announced that he was going to try an experiment.

For two months he was at work, Freida, Bruce, and occasionally Bax, helping him. Gradually he molded together a mass of synthetic tissue in the form of a man. Day by day the others watched his capable hands knitting together nerves, synapses, and root-ganglia. They marveled at the delicate tracery of veins and arteries he had devised—the artificial heart made of gold with a valvular action as flawless as the intricacies of a clock—the eyes fashioned from lenses, complete with a synthetic optic nerve and irises which dilated and contracted on hair fine springs under the impact of darkness or light. Hair cells imbedded in the skull grew luxuriously under stimuli until by the time the synthetic man was fully fashioned, in the long, sealed transparent "creating tube," it would have been impossible to distinguish him from an ordinary human being, asleep.

"Now what?" Bax inquired, when this stage had been reached.

Eberhart was silent for a moment, his powerful face thoughtful. After a brief checkup of the apparatus, he turned and answered the question, looking at the three interested faces.

"What I am going to do now will decide our future once and for all, so far as synthesis is concerned. I am going to pass a radiation current through this human being. It will be identical to the one streaming down on the surface, the one which Eddington said begot life in dead cells when the world began—one-point-three times ten-to-thirteen cms. We know such a current produces metabolism, evolution, and mutation, so it might equally well start life going here. The projectors at either end of this case will duplicate that wavelength exactly."

Eberhart turned, grasped a switch, and gave a sardonic grin as he glanced at Bax's thoughtful, bearded face.

"Say, Bax, you'd better ask those gods of yours to keep their fingers crossed. The fate of Earth's peoples' future depends on this."

With that he jammed the switch home and a deep whining pervaded the laboratory. Tensely he stood watching the creature, but no more tensely than Bax, Freida, and Bruce.

A minute passed and nothing happened. Eberhart swore and put on more power. The creature began to glow with the fury of energy interchange passing through him. But there was not a tremor, not the faintest quiver of a reflex.

Eberhart looked ten years older when he cut the power off. He stood without speaking for fully a minute. Then he raised his gray eyes to the solemn faces.

"Useless!" he breathed, clenching his fists. "Useless! Months of work just thrown away on a theory! Life can't be created by science—and truthfully I never thought it could."

Bax looked into the case and gave a little sigh. Even his massive body was drooping a little from disappointment, but as ever there was no condemnation in his voice.

"At least you tried, and I never saw more brilliant surgical work. You are sure you haven't overlooked something?"

"Only too sure."

**B**AX pondered, his hand absently toying with the instrument beside him. Finally he turned and looked at it. It was the eyepiece of the powerful X-ray telescope with which he had viewed the surface at the time of the catastrophe.

"Is it another of those cases of conation and inspiration?" Freida's voice whispered beside him.

"Eh? What!" He jerked out of preoccupation and looked down into her earnest eyes.

"You remember," she persisted. "It's the same as when we were in the plane. You told me about the physical guide operating before the actual idea?"

"Yes—yes, of course."

"Why did you take hold of that telescope?" she demanded. "You did it for a reason, sir. Think! What reason?"

"What's all this about?" Eberhart demanded impatiently, but the girl waved her hand at him.

"Don't disturb him, doctor. This may be the beginning of a great idea. His brain produces a physical sign and an effort of thought provides a reason for the act."

"Uh-huh," Eberhart admitted, raising his brows. "Could be."

"Yes," Bax said suddenly, straightening up with gleaming eyes. "I have it! Now I know why I held this telescope. The gods moved my hand to it, intending the movement to start an association of ideas. Telescope—space—planets! Eberhart! The only way for us to survive now synthesis has failed is to go to another world!"

The scientist gave a start of astonishment. "Another world!" He laughed shortly. "And you say I am ambitious! We're trapped down here and you suggest another world

—just like that. With what? How?"

"Hear me out," Bax insisted. "The gods are talking this time, not me. That's why I know my idea is right. The correct propulsive force for a spaceship would be atomic force, wouldn't it?"

"Well, yes—in rocket firing chambers. The usual recoil principle."

"Very well, then. We have huge quantities of copper down here from our mining activities, and that is the right stuff for disintegrative work. We must design rocket motors with complete atomic disintegrator equipment, then build the ship itself at the base of the elevator shaft. When the machine is finished, it can be tilted nose-up. The top of the shaft will have to be drilled straight on through because right now it bends at right angles to the entrance tunnel. It must be bored perfectly straight. A thin layer of transite lead will be left over the top like a skin, through which the departing ship will finally plunge like a clown through a paper hoop. A cut-off cover, controlled from our power houses down here, will be swung into place when the machine has passed through, thereby keeping our air supply at normal pressure."

Bax stopped, his eyes bright. Eberhart's face was a study.

"Why, hang it, man, you have it!" he cried. "And I believe it can be done too. But which world shall we travel to?"

"Venus," Bax said, without hesitation. "A young world, full of possibilities for a race trying to start again. On that world this deadly radiation will be masked by the dense atmosphere, so the power of procreation will surely function normally. What further difficulties we encounter, science will have to conquer."

Eberhart turned aside, his mind obviously made up.

"Leave me—all of you!" he ordered brusquely. "I want to work alone. I must design the proper motors."

Quietly the three obeyed his wishes.

## CHAPTER XIV

### *Age Out of Space*

**A**FTER that same "evening"—judged by the clock for the cold light of the underworld never waxed or waned—Bruce and Freida found the first opportunity in many hectic weeks to while away an hour together. They elected to spend it in the rocky expanse just outside the city environs. Choosing a high eminence, they sat side by side, looking out over the busy life spread below them.

"I don't know if you've noticed it," Freida said presently, "but since we have been underground I've felt far better than I did in Capital City. Seems rather odd to me to be in better health away from the fresh air of the surface."

Bruce puzzled over that for a while, his arm about her slender waist.

"How better? I haven't noticed anything."

"Are you sure you haven't?" she insisted. "You didn't notice something once before until I asked you to think carefully. I'm asking you to think again. For instance, I don't feel quite as clever as I did, and I forget more easily, just as though I'm more human and less of a machine."

Bruce shrugged. "Probably it is the air down here at that!"

Freida fixed her clear eyes upon him.

"No, I don't think it's the air," she said finally. "I don't know really how to explain it, but for the first time since the Change I feel like—like a woman in love."

Bruce smiled, drew her closer to him, and kissed her.

"Suits me if you feel romantic," he murmured. She pillowed her head on his shoulder as he went on. "Yes, now you mention it, I find a difference. Being a man and a woman means more than it did up there. I

[Turn page]

# Now She Shops "Cash and Carry" Without Painful Backache

Many sufferers relieve nagging backache quickly, once they discover that the real cause of their trouble may be tired kidneys.

The kidneys are Nature's chief way of taking the excess acids and waste out of the blood. They help most people pass about 3 pints a day.

When disorder of kidney function permits poisonous matter to remain in your blood, it may cause nagging backache, rheumatic pains, leg pains, loss of pep and energy, getting up

nights, swelling, puffiness under the eyes, headaches and dizziness. Frequent or scanty passages with smarting and burning sometimes shows there is something wrong with your kidneys or bladder.

Don't wait! Ask your druggist for Doan's Pills, used successfully by millions for over 40 years. They give happy relief and will help the 15 miles of kidney tubes flush out poisonous waste from your blood. Get Doan's Pills. (Adm.)

get a real kick out of holding you in my arms. Maybe I'm not so smart as I used to be, either. I'm doing a bit of forgetting myself now and again, too. Not that I care so long as we have each other. Newly-wed husband greets wife for the first time!" With that, he kissed her soundly.

She snuggled closer to him. In silence they gazed out over the reaches of the underworld.

"Do you believe Dr. Eberhart will succeed?" she asked, low-voiced. "Will it really be possible for us to start life again on another world?"

"How can I say? For myself I'm quite happy here without the hazards of space travel and the struggle to conquer a new planet. But, of course, there's a posterity to think of."

"Of course," Freida whispered. "I guess it's important."

For perhaps a hour they remained in their quiet, peaceful eyrie until with a sigh, Bruce roused himself and helped the girl to her feet.

"This won't do, honey," he said regretfully. "We'll have to be getting back to see if Eberhart needs anything."

Arm-in-arm they began the return trip languidly, talking as they went. But before they left the high ground, Bruce paused and looked over the rocky expanse.

"Say, what's that?" he asked.

He nodded at some delicate feathers of blue flame dancing about in mid-air not far away.

"Internal gas," Freida answered. "Volcanic. Same sort of will-o'-the-wisps you notice over bogs. Rather pretty, eh? I'd forgotten you'd never seen it before."

He watched the lights for a while. Finally taking her arm, he moved on with her again.

Much to Eberhart's annoyance and surprise, it took him six weeks to work out a practical method of utilizing atomic force for rocket recoil motors. Once he had accomplished this, the rest of the task was fairly simple, since he designed the space machine itself on the pattern of a submarine, and the immense resources of the underworld foundations did the rest.

Working from Eberhart's designs the engineers had the machine finished within a month, a period during which hundreds of workmen with atomic drills set about the job of straightening the underworld shaft. Eberhart supervised all of the work himself, not taking anybody into his confidence.

One "morning" he asked Bax, Bruce, and Freida to accompany him to the site of operations.

its chrome steel cradle. Its blunt nose was pointing directly up the yawning mouth of the vertical two-mile-long shaft leading to the mouth of the cavern.

"Its blackness will do much to neutralize the spacial radiations," Eberhart explained. "I've made all the arrangements and am all set to go. I've stored copper in the power plant to carry me to Venus and back several times."

"By rights I ought to make this trip," Bax said.

"The only claim you have for making the trip is that you thought of the idea," Eberhart answered. "There's no other reason. This is a task for a scientist—somebody who knows how to deal best with the many physical disorders attendant on a space journey. Besides, the people here want you, not me. You're the man with the ideas. Also, I'm worried. It took me six weeks to work out these rocket motors, so I must be slipping. When I come back I'll analyze the air down here. I think there's something in it that dulls the mind, maybe that volcanic gas just outside the city limits."

"Can't be that," Bax said. "It's tasteless and odorless. I found that out when I first came down here."

"So is nitrous oxide, and that can produce queer effects all right," Eberhart grinned. "In excess it's deadly. Well," he looked at them sardonically, "maybe you'll shake hands with me before I attempt something no man ever did before?"

Bruce and Freida shook hands warmly enough, but said nothing. Eberhart looked at their young faces and frowned. Somehow they looked different. Then Bax's powerful grip was pumping his arm up and down.

"The very best of luck and our good wishes go with you, Eberhart. The fate of this planet's survivors is in your hands. Just make the trip, analyze everything you can about Venus for examination here, then come back. Agreed? No stunts? No dangerous explorations for the love of science?"

"You're the boss," Eberhart said dryly. With that he climbed into the machine and closed the airlock.

The gyroscopic interior kept the control cabin on even keel despite the tilt of the ship's outer casing. Settling himself before the controls Eberhart gave the warning for those outside to stand clear. Through the port he watched the immediate area gradually become deserted. Only now, fully conscious of the immensity of the thing he was doing, did he switch in the current to the atomic force motors.

The machine jerked. Then with a breathless uprush that flattened him in his seat, it began a terrific initial leap up the shaft.

**I**N SPEECHLESS admiration they gazed on the dull black ovoid tilted vertically in



Faster and faster! He covered the two miles in a matter of seconds, and closed his eyes as the thick rock and transite barrier loomed before him. For an anguished instant he thought of what might happen if he had underestimated the thickness of that barrier!

There was an awful crash but, with hardly any jolt at all he roared through. Next, below, he saw the lid of the emergency lock sliding back into place.

Soon he was climbing high over the gray ruin which had been Capital City. He looked down on a vast plain, a titanic lava field as it appeared, already becoming remote. Far out to sea there loomed again a formation of new algae, born since the great electrical storms.

Presently he turned his attention ahead. The pale blue sky was darkening to violet. In thirty minutes of acceleration he had left the last vestige of atmosphere behind and thereby had become the first man to travel in free space.

Awed, he took stock. The sun hung before him, the pearly glory of its corona reaching for endless miles. The moon, nearly full, was of an incredibly bright silver and visibly a globe. To this was added the infinite hosts of stars, the distant planets and galaxial seas beyond. The void lay as a glittering abyss waiting—waiting to be explored. That made Eberhart forget everything else for a moment. Then his eyes searched for and found the brilliant blazing point of Venus.

He began to chart his course. Half way through, he hesitated and rubbed his forehead. An unexpected pain had him in its grip. The pain grew steadily as he flew onward. He no longer was capable of concentration—of doing hardly anything, in fact.

It was fearfully hot, too. He loosened his collar and mopped his face. Then realizing space might produce many unexplained ailments, his medical instincts came to the fore. He reached out for a clinical thermometer and thrust it under his tongue, at the same time testing his pulse rate.

**PULSE.** ninety-six! Temperature, one-hundred-and-six, Fahrenheit! It was preposterous! On Earth, he would be dead. Through a dizzy haze of pain he tried to think—until he noticed something else, something which jolted him into a full sense of his predicament and filled him with despairation. He had caught sight of his own hand holding the thermometer.

He held up both of his hands and stared at them in horror. They were thin as kite's claws and corded with blue veins under a skin as dry and yellow as a mummy's! Aghast, he reverted to his old habit when baffled, and thrust his right hand through his hair. It fell out in white chunks!

This brought him to his feet on quivering legs. Shaking with terror, he looked into the wall mirror and saw a bald-headed, stoop-shouldered man in flying kit which bagged on a shrunken frame! His face had grown incredibly old, sunken into shadowy hollows over which could be seen a tracery of fine seams. The eyes remained as feverishly bright spots in pools of darkness.

"Age," he whispered, and his voice rasped. His lips curled into a sardonic grin. "So that's what Methuselah must have looked like! Age! My stars!"

Dimly he knew why it had happened, but this was not the time to think it out. Fighting his pain he set the controls again, turned the machine around and began the return trip to the still not too distant Earth as fast as his throbbing heart and lungs would allow.

## CHAPTER XV

### *The Last Inspiration*

**E**ALF-dazed by pain and shock, Eberhart never quite knew how he made that terrible journey back to Earth. The interval was blurred and unreal, filled with periods of insufferable anguish that almost robbed him of consciousness. But when he came back into Earth's atmosphere the pain began to lessen, and finally ceased entirely. But the ordeal left him weak, tottering.

He radioed for the shaft to the underworld to be opened, refusing to answer Bax's amazed inquiries from the other end. He managed to guide the machine down the shaft to the base, before his senses reeled and everything became a blank.

The impression he made on those who found him was overwhelming. They discovered a man of apparently ninety years of age, feeble of build with only a few tell-tale evidences to prove that he really was Jan Eberhart, the fifty-year-old scientist.

Bax had him removed to his own dwelling and Freida, with her nursing knowledge, took over the job of ministering to him. A day passed, then a week, finally a month. Yet Eberhart lay in a coma, fed by injections, and delirious at times. Incessantly he continued to babble about cosmic rays, the solar corona, and Methuselah.

Bax, baffled, finally sought Freida's opinion. "Senile decay," she said seriously. "But don't ask me why! Our advanced medical knowledge keeps him alive with drugs, and I have hopes that he'll recover and tell us what really happened."

"How long may that take?" Bax asked anxiously.

Freida shrugged. "Hard to tell. It may

be several weeks, or several days. There's no way of knowing. As long as I can keep him alive, there's a chance."

Bax fell silent, clearly worried, gazing down at the motionless figure in the bed.

"One thing is certain anyway," Bruce remarked at last. "Space travel isn't the easy job some people imagine. If this is what happens, obviously we can't do it."

"True," Bax admitted quietly. "All our fond hopes dashed! As for me, I'm probably the most useless ruler in history."

"That isn't true, sir!" Freida objected quickly.

"Yes, it is," he said with a smile. "Thanks for being loyal to me, though. At one time I was able to get inspirations frequently, but not now. The last one concerned space travel, and that was many weeks ago. For some reason the inclination just isn't with me any more. In fact," he finished seriously, "I feel more like Lincoln Bax, military commander, than at any time since the Change!"

Freida shot a quick glance across at Bruce. Soon she looked back to the leader again.

"So you also feel it?" she asked.

"Feel it?"

"There is something wrong down here, sir," Bruce elaborated. "Freida and I feel almost as we did before the Change. Then Eberhart admitted before he set off into space that he was becoming less keen than usual. It took him a long time to work out those recoil motors, remember. Now you, too, say you feel changed, a sort of reverberation back to what you were. Possibly others are affected the same way, only we don't know of it yet."

"Eberhart said it might be caused by that volcanic gas," Bax mused. "I wonder?" Suddenly he made up his mind. "I'm going to have a look at it and get it analyzed if I can."

He turned to go, but paused as Eberhart moved in the bed. Instantly Freida was at the scientist's side.

"Doctor, you're conscious again! Can you hear me? It's I, Freida."

"Yes, Freida, I can hear you." The scientist's voice was reedy with age. "I—I heard what you were saying."

Bax leaned over him urgently.

"Eberhart, what happened out there in space?"

The aged face broke into a semblance of an ironic smile.

"Something I should have thought of—and forgot. Now I know I'm slipping! In free space one gets the full blast of that short wave evolutive radiation, with its attendant fast metabolism. I used up the energy of a good forty years in about as many minutes. My temperature and pulse rate showed it. Man will never cross space until

a way is found to insulate space fliers against that danger."

Eberhart closed his eyes for a moment.

"I may be very old in body, but I'm not old yet mentally, and I'm not going to die just yet!" he resumed. "Also, I know drugs, and if Freida will make them up I'll be on my feet to annoy you again in no time." His faded eyes rested on Bax's strong features. "You see, Bax, I want to be here until we've conquered this mess we're in. When we've done that I'll be satisfied and you can pack this worn-out body into the first orange box you can find. And Bax, I should certainly get samples of that gas in an ampule. Freida will go with you. She knows about these things. The gas may be the cause of our queer recession. If not, I have another theory, probably the right one. Now clear out, will you?"

Bax glanced at Freida and together they turned to the door, leaving Bruce to handle things in case of any sudden emergency.

ONCE Bax and Freida had reached the gas area, Bax stood watching as the girl drew off a sample into the tube she had brought with her.

"Easy enough," she smiled, returning to his side.

He did not answer, and a little frown crossed her face at the look in his eyes. Once before she had seen it, but never so brightly. He might have been carved in stone as he stared out over the swirling shapes in the rocky expanse.

"Freida—" his voice sounded oddly other-world—"Freida. I was wrong! The gods have not deserted me! Perhaps they have reserved their favors for this last—this mightiest—inspiration of all!"

Turning suddenly he caught the surprised girl by her slim shoulders and swung her to face him.

"This gas is going to be our salvation!" he said deliberately.

She hesitated, looking up at him, loath to question his intense earnestness.

"I know it!" he insisted. "Chance led me here. The moment I questioned why I came, I knew it was to find the means of delivering these people who have trusted me so long." He paused, released Freida's shoulders and drew a breath. "I shall never have an inspiration again," he said slowly. "But that I don't regret for I know that my duty as a leader will have been fulfilled with this final triumph."

"I don't see—" But Bax took Freida's arm before she could get any further.

"You will, believe me. I want to have this gas analyzed the moment Eberhart is fit enough to do it. His is the only science I trust. Come. You'll have to fix up those pre-

scriptions he was talking about. Get him well quickly!"

If any further indications of Bax's gradual descent from the heights of Olympus were needed, they were revealed by his anxious impatience during the week which followed. He constantly kept inquiring about the health of Eberhart and could hardly control his restlessness while waiting for the scientist to recover.

For his part, Eberhart convalesced as fast as restoratives permitted, but it was principally his curiosity to discover what was worrying Bax so much that finally got him on his feet and into the laboratory again.

There, a tired shrunken little man with a bald head, he took the ampule of gas Bax handed him.

"From what you've told me, Bax," he said, in his cracked voice, "this is going to prove the salvation of the people."

"I know it is! Analyze it!"

Eberhart glanced at Freida and Bruce as they stood watching, tense with interest. When he went through the routine of his test, he did it so thoroughly that it proved he had not lost his touch.

"Odorless, tasteless, it falls into no classification we know," he said finally. "There are traces of all the elements we can find in our atmosphere—nitrogen, oxygen, krypton, hydrogen. Here are all their bands in the spectroheliograph plate. In fact one might call it a composite gas. But I don't see what it can do for us." He shrugged.

"You've missed something somewhere," Bax cried. "Try all the other tests you know. So far you've only analyzed it. Try something else."

Interested by Bax's urgency, Eberhart went further. He tested the gas in various instruments, tried its density, its power of sound-wave carriage, its heat, its conductivity, its insulative resistance to various radiations. After this last experiment he looked up sharply and threw the switch on his instrument on and off several times, studying the fluorescent screen.

"That's odd!" he ejaculated. "This radiation doesn't pass through the gas. It's turned aside."

"What does that mean?" Bax demanded tensely.

"Presumably that the gas has a likely ionic quality in its molecular makeup."

Bax began to smile through his beard. "And what is radiation that fails to penetrate?"

"The shortest radiation," said the scientist. "It has a wave length of one-point-three times ten-to-thirteen cms." Suddenly Eberhart gave a tremendous start and glanced at Bax from beneath his shaggy white eyebrows. "Man, where do you get

these ideas? This gas blocks the very radiation which is causing all of our troubles up on the surface of the Earth!"

BAX nodded. "That's it. I told you it was to be our salvation. I knew it even then."

"You mean it could take the place of our shattered ionic layer?" broke in Freida's excited voice. "Could it, doctor?"

"No doubt of it," he answered after a moment of thought. "It is very light in density and capable of mingling harmlessly with our atmosphere. Its own ionic quality and the ionization it will therefore impart to the molecules of the atmosphere surrounding it, should bring about a reestablishment of our lost shield. But," Eberhart finished with a dubious shake of his head, "such a plan would require vast quantities of gas, millions of cubic feet. There would have to be enough of it to affect our atmosphere progressively."

"We can get it," Bruce answered quickly. "It's volcanic and escapes through the seams in the rocks down here. It must lie in vast untapped quantities under our feet."

"That's what I figured," Bax nodded at Bruce approvingly. "If we dig a shaft down, we can easily pipe the gas to the surface."

Silence fell upon the group as everyone sensed the amazing possibilities of the idea.

"Yes, a giant funnel would do," Eberhart said at last. "We'll use atomic force to blast through the last skin of rock when our instruments show that the gas core is just below."

"Then it will rush up, the funnel and out into the atmosphere, to mix and form a protective surface for the Earth. What a triumph!"

"This time the gods have been generous," Bax was smiling. "We must get the engineers to work immediately."

"And who will take the final risk of setting off the atomic force charge?" Eberhart asked. "As I see it, to do things properly would be a suicide job. Somebody would have to remain in the shaft and fire off the explosive. Remote control won't do for that. One slipup and the whole underworld might cave in, or be destroyed by volcanic fire from the shifting of the inner strata."

"I'll handle the dangerous job," Bax said deliberately. "Since I've had my last inspiration and am fast going back to the status of a normal man, it's my final duty to the people."

"I see," Eberhart meditated over it for a moment. "Do you know why all of us have less touches of genius and have grown more human?"

"It isn't the gas, anyway," Freida commented.

"No, it's the transite. I realized that while

I was convalescing. I'd plenty of time to think. Transite has mutated into the atomic equivalent of lead, just as radium will do over many thousands of years. It is an elementary scientific fact that cosmic waves and ultra short radiations—one-point-three times ten-to-thirteen included—cannot penetrate lead. So, shielded down here, our spurious gift of knowledge is fast waning. It never was a substantial thing, destined to persist. As the brain constantly develops a fresh layer of cells, those beneath are buried, and memory dies away. So, such cells affected by the radiation are being covered up. With it goes all pretense of being god-like."

"Then if we stayed down here long enough, the human race might increase again?" Freida asked quickly.

"It might," Eberhart admitted. "But to a human being a life in even a replete underworld like this is slow death. Lack of natural sunshine, fresh air, natural food— No, really to survive, life must go back outside!"

"It will," Bax said softly. "It will!"

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## CHAPTER XVI

### *Eberhart Pays a Debt*

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**P**ASSAGE of many weeks found Eberhart,

Bax, Freida and Bruce deep in plans for their proposed release of the volcanic gas, which the scientist had named Xogen-X. Soon their real troubles began. To plan out the sinking of the shaft and the building of the vast steel-and-rock funnel to the surface had been one thing, but the execution of it—especially that of the downward part of the shaft—was decidedly another.

Bax and Bruce took charge of the shaft sinking, and Eberhart and Freida that of the upper section which would be driven to the surface. But in the downward drive every conceivable difficulty was to be encountered.

After a month of burrowing with the transite-coated drills—for the metal was the toughest obtainable so long as it did not mutate—they encountered a hard core of rock. The core was under terrific pressure at this depth. The drills were chewed and broken and another month went by in comparative idleness while they were recast in the foundries. In the meantime suicide squads smashed at the barrier with atomic force charges.

The underworld rattled and vibrated incessantly when the drilling was finally resumed. But of course with every foot of descent, the pressure and hardness of the barrier increased with the square of the distance, slowing progress to eight feet a day.

Also instruments revealed the core of the gas was still another mile or so below, at least.

"But we'll make it!" Bax declared, when he and Bruce had studied the latest reports. "Yes, we'll make it if we have to pick our way down the last half mile with teeth and fingernails! Come on. We've no time to lose!"

So back to work they went, struggling just as hard as the grimy, sweating engineers and laborers to bite deeper into the earth. Above them, floodlighted, rose the smooth walled shaft. There was no sign of a joint or break in it, except the tiny doorway.

More weeks went by, then months. Few noticed the passage of time. All attention was concentrated on the project itself. But everybody did take time off to celebrate when the upper half of the shaft was completed and tested, its valve cover was made all ready for the cover to be opened when the time came for the gas to be released. It was sheer misfortune that the gas wells were situated at the opposite end of the city, furthest from the surface elevator shaft and valves. Otherwise the work could have been halved. Still, such a thing could not be remedied. Eberhart and Freida's part of the job was finished, anyway. But for Bax and Bruce work still went on.

Doggedly, despite shaft cave-ins, explosions, and outbursts of volcanic fury, they went on down, hardly noticing that in the passing months they had become ordinary men again. Particularly in Bax, was the alteration most apparent. Grim, bearded, strong as steel spring, that period of god-like calm and brilliant inspiration had gone. Instead he had changed into a husky, struggling—even profane—giant. . . But he was still the leader, and a superb one too.

At last came that wonderful moment when their instruments showed only six feet of unthinkable hard basic rock separated them from untold cubic miles of gas, under vast imprisoning pressures.

Drilling ceased. The rest was up to—Bax!

He, Bruce, and the engineers went up to the underworld for the first rest they had dared to take in many grinding weeks. So urgent had been the task they had slept and worked on the site of operations.

Now, as the elevator opened its gates into the underworld, it was like coming home to see the mass of eager faces waiting to greet them. As he stepped from the cage, Bruce paused and looked anxiously around at the throng.

"Say, Freida's not here," he said, in worried tones, looking up at Bax. "She must have known we were coming up."

"Eberhart's missing, too," Bax frowned. They both turned as a woman in a nurse's

uniform approached them rapidly from the crowd.

"I have a message from Dr. Eberhart, sir—for you both." The woman looked up at Bax. "I'm acting as Dr. Eberhart's temporary nurse."

"But that's Freida's job!" Bruce blurted out.

"Your wife is ill, Mr. Cranley," the woman said quietly. "She is at your apartment. Dr. Eberhart wants you both to come at once."

Bruce waited for no more. Tired though he was, he pushed through the crowd at desperate speed. Bax and the nurse trailing behind him. When Bruce reached the apartment ten minutes later, he found the wizened Eberhart awaiting him. Eberhart raised his hand for silence.

**B**RUCE slowed up, caught at the scientist's skinny arm.

"Doc, what is it? What's happened? Why didn't you tell me?"

"There wasn't the time," Eberhart paused as Bax and the nurse appeared. The woman went straight through to Freida's room and closed the door.

"We're near the crisis," Eberhart said quietly. "Bax, see that Bruce stays here."

He turned and followed the nurse. Frantic with anxiety, Bruce swung around to Bax who was standing in puzzled silence.

"They can't do this to me!" Bruce cried. "Free's ill! That means she needs me! Eberhart was inhuman not to have told me!"

"Take it easy," Bax insisted, and pushed him into a chair. "You're nervous and harassed. Sit down and get a grip on yourself."

He saw to it that Bruce did not get up again either. There were many tense, anguished moments. Then at last their suspense was ended by an unbelievable sound—the crying of an infant!

Bax swung round and stared at the closed door. Bruce resembled a man who expects to see a ghost at any minute.

"It—it can't be!" he whispered. "Bax, that's a baby we hear. It's a illusion. It isn't there! The world's barren!"

Bax said nothing. The surprise of listening to that crying infant had numbed him for the moment. To both of the men it seemed like an eternity before Eberhart appeared again.

He closed the bedroom door and stood with his back to it, a little goblin of a man in shirt sleeves. He was smiling cynically.

"I'll bet you're stunned," he remarked at last. "Congratulations, Bruce! You're the father of a lusty daughter! Hang it, man, don't look so scared! It's quite a natural biological function I assure you."

"But—but it's not!" Bruce stammered. "At

least, not now. You told all the world there would be no more births."

"That was before we had a lead shield over us. We've all gone back to normal. I've had news of other childbirths from different parts of the underworld. Both sexes, and since all the infants I have examined show no signs of genius, we may presume they are normal in every way, as your daughter is. It means, Bruce, that the race begins again!"

"Thank God for that," Bax breathed. "All we have to do now is go up to the surface, after we're sure the gas has reformed the ionic layer."

Eberhart nodded. "And you still mean to do the job yourself?"

"Definitely!"

"And who will lead the people afterwards?"

"I see no reason why Bruce shouldn't—he and Freida. Later on their daughter will have a say in it. Eh, Bruce?"

"Huh?" Bruce gave a violent start. "Oh, I—I don't know what to think. My main worry is my wife. When can I see her, Doc?"

"Later. Right now you need a rest. You're all in. Then when you're awake again, I'll see what I can do."

Bruce hesitated but Eberhart was insistent. Finally he went into the spare bedroom and thankfully stretched out flat.

"Take this," Eberhart said, handing him a glass of rosy-colored fluid. "It'll help you sleep."

Bruce drank the liquid, glad to ease his weary bones after weeks of toil. Eberhart stood watching him for a moment, walked out, closed the door softly, and rejoined Bax.

"I think I'd better get a rest, too, before preparing to set off the charges," Bax remarked. "Maybe you can fix me some of that stuff?"

"Surely." Eberhart opened his medical bag and prepared another drink. Bax sipped it slowly. In a moment or so, he rubbed his forehead vigorously.


"I feel—dizzy," he muttered. "Just as though—"

He broke off, the glass dropping from his hand. At the same moment his knees gave way and he sprawled his length on the carpet. Eberhart stooped and, by exerting all his strength, managed to drag him into the armchair.

That done, he turned to the bureau and busied himself for a while writing a letter. He sealed it up, addressed it, then pondered for a long time. Finally making up his mind, he went to Freida's bedroom door and called the nurse to him.

"You can finish this case by yourself now, if I send in Nurse Wilson from the hospital?" he asked.

"Why certainly, doctor, but—"

 CURIOUS look in Eberhart's eyes silenced her.

"I have given both Mr. Bax and Mr. Cranley a good sleeping draft," he went on, seeing her looking at Bax's recumbent figure. "Neither of them will awake for about three hours. Whichever of them awakes first, give him this."

The nurse took the letter and stared at him in astonishment.

"I'll send over Nurse Wilson," Eberhart finished. Picking up his bag, he left the room, quietly closing the door behind him.

After his call at the hospital—where in the privacy of his own room he tipped out the contents of his medical bag—Eberhart went direct to his laboratory and filled the bag with six copper blocks, each with a magnetic detonator—terminal on the top. Then he went to the shaft elevator leading to the depths.

He, himself, sent the cage plunging down the vast length. Stepping out at the other end, he surveyed the scene of his operations. The foreman in charge came hurrying over. "Oh, it's you, Dr. Eberhart! Anything wrong?"

"No, nothing wrong. Bax has asked me to tell you men to get to safety. We're going to destroy this barrier by remote control after all—but first I'm going to set the charges and make a test. Where's the exact site?"

The foreman took him to the spot and showed him the special drillings which had been made. Eberhart nodded and put his bag down.

"Okay. When you reach the underworld, telephone me. Don't forget to close the elevator doorway before you open the lid of this shaft to the surface."

"Yes, sir." The foreman hesitated. "What about you, sir?"

"I'll tell you when my test is finished. Now be on your way."

The man nodded, though he looked puzzled. Eberhart watched him collect his men and then head for the elevator. When the cage had soared up out of sight, Eberhart took the copper blocks from his bag and fitted them into the prearranged holes, wired them up to an electric contact-plunger, standing ready amidst the equipment.

The telephone bell connected with the underworld rang sharply.

"All set, doctor," came the foreman's voice. "We've shut the elevator shield and opened the surface valve cover. What do we do now? Put things back as they were and come and get you?"

"No," Eberhart answered calmly. "That won't be necessary. Just wait for further orders."

He put the telephone back on its rest and walked slowly across to the plunger. He gripped the handle in his white, veiny hands, then stared above him. At an unthinkable distance over his head was a circle set with brilliant stars—

He slammed the plunger home—to the limit!

\* \* \* \* \*

The explosion rocked the underworld to its depths. There was not a soul who did not feel it. In Bruce Cranley's apartment the shock of it aroused Freida to alarmed inquiries of the nurse. In the adjoining room, the thudding shiver jerked Bax from his half sitting position in the armchair to the floor. He awoke, bemused, and rubbed his head until he was helped to his feet by the chief nurse attending Freida.

"Have I been asleep, or what?" he demanded.

"Yes, sir, for the past two hours or so. It must have been that dreadful explosion which woke you up—"

Bax was suddenly wide awake. "Explosion!"

"Yes, sir. Oh, Dr. Eberhart asked me to give you this."

Bax took the letter and tore open the envelope. The nurse watched him read with widening eyes. He swung around as the door of the second bedroom opened and Bruce appeared sleepily.

"Did I hear something?" Bruce asked. "Sort of rumbling earthquake?"

"You bet you did!" Bax leaped forward and caught his arm. "Eberhart purposely drugged us so that he could blow up the bottom of the gas shaft himself. We must see what's happened. Come on!"

Bruce hastily followed Bax out of the apartment. When they reached the elevator shaft doorway they found the steel slide barring passage and a mob of people milling around it.

"What's going on around here?" Bax roared. At the sound of his voice the foreman of operations hurried up.

"It's the gas, sir. Dr. Eberhart released it."

"I told you I was the one who was supposed to release the gas," Bax snapped. "You should have prevented him."

"I didn't guess what he was figuring on doing, sir."

The foreman hesitated before explaining what had happened. Bax stood with compressed lips until he had finished.

"How about the gas?"

"It's getting through fine, sir. We're keeping a full check on it. Near as we can tell it will be about twelve hours before the pocket is exhausted."

"Right. Stand by. I'll stay with you."

"But I won't," Bruce put in. "I want to



see Freida and my new daughter. They mean more to me than all the gas in the underworld."

Bax grinned. "I understand. All right, I'll see you later."

## CHAPTER XVII

### *Deliverance*

**R**EPORTS arrived, eight hours later, that the gas pocket was empty. When Bax got the news from the foreman, he studied the pressure gages. Their needles had dropped to zero. Next he inspected the atmospheric density meters connected with the surface instruments.

"There's one sure way to tell what's happening above, sir," the foreman remarked. "Zinc-sulphide screens turned face upward will cloud if that ultra-short radiation is still getting through."

Bax nodded. "See that the screens are tried, and report to me the moment you have any worthwhile information."

With that Bax left the instruments and elbowed his way through the excited crowd. They asked eager questions.

"Does it mean that we're going back to the surface, Mr. Bax?"

"Are you going to lead us as you did before?"

Bax turned and smiled at them.

"I'll be your leader again, if you still want me."

"Want you!" The gladness in their voices put an end to his doubts. Yes, he'd lead them to greater glories perhaps. Bax returned to his quarters.

For the next twenty four hours he waited impatiently for another report from the foreman. Finally news came over the radio-phone.

"You did it, sir! Saved us again! The surface is fit for human life once more. The fluorescent screens are unclouded and our scouts report within the last twelve hours, the growth of algae life has practically ceased. In fact a lot of it is beginning to crumble away."

"So it will," Bax answered. "What Eberhart called the Law of Natural Selection is operating again—big things destroying little things. All you need to do is open every valve leading to the surface and leave the rest to me."

He switched off and opened the microphone to the main loud speakers.

"People everywhere!" His voice boomed through the underworld. "Our subterranean imprisonment is ended. I have just been advised that scientific research has at last conquered the deadly radiation which brought such a tragic aftermath to the greatest war in history. Continue to put your trust in me and I will do all in my power to lead you to a happier, saner mode of life. Remember that you and your few children form the nucleus of a new world state. Except for a miracle here and there, reports have shown we are the last survivors of an old world,

[Turn page]

## "Don't Tell Anyone Where I Am—Please Don't Tell Them Anything—"

**D**IRK BRADDICK looked in amazement at the beautiful young creature who had suddenly landed on Earth—right in front of his laboratory.

"Who are you?" he asked.

"I—don't—know—just who I am," she said weakly.

"Then I'll tell you," said Dirk. "You are a lady spy for Atomic Power. And you've been dropped by parachute. Isn't that right?"

"I don't know. But please—hide me! Don't let them find me!"

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and the pioneers of a new. So, you engineers and architects, draw out your plans for a new city and a new land. Those of you who are ready to go above and lay the foundations of our new empire can start any time you choose. Life begins again!"

Bax switched off and got to his feet, stood looking out over the busy surge of movement in the underworld. After a while, he hastened to Bruce Cranley's apartment. The nurse let him in.

"Could I see Bruce?" he asked.

"Why, certainly, sir. He's with his wife at the moment. We have all been listening to your broadcast. It's wonderful news that we can go above ground again."

"Yes, isn't it?" Bax said rather brusquely. Pausing at the door of the bedroom, he tapped first, then entered. The other nurse went out in response to Bruce's nod.

Bax's eyes strayed from Freida's blond head and eager, bright face to the tiny figure beside her. He advanced slowly, leaned over the little creature, massive, muscular and tall.

"I guess it's still the greatest event that can happen," he said at last, straightening up. His glance strayed to the bedside chair and Bruce, who was sitting there, unshaved but blissfully happy.

"We owe it to your foresight, sir," Bruce said earnestly. "If you'd never come into the underworld, things probably never would have been righted."

"We heard your broadcast," Freida cried. "It was marvelous! To think that as soon as I am up and about—and it won't be long with our medical knowledge—I can go out into the sunshine and fresh wind, feel the rain in my face. I'm looking forward to the simplest pleasures—a walk with Bruce." She drew the infant more closely to her. "How wonderful! Mr. Bax, you've mastered every problem we have had to face."

"With the help of the gods," he answered with a smile. "And, you know, Eberhart has a share in this final achievement. His letter

to me is a typical example of the man—courageous, cynical—a scientist to the last. Listen."

HE PULLED the letter out of his pocket and began to read it.

"My dear Bax: Though you will never have an inspiration again or that moon-struck look in your eyes, you are definitely the only man to rule the people. I've decided that a doddering old nitwit who forgets can be of no use in the hard struggle of building a new world. I've done my share and skipped forty years of probably harrowing circumstance in the doing. I don't mind dying for I've often wondered what's on the other side. If I find more problems to be conquered that are as big as this one has been, I'll come back. So I'm going to release the gas.

"You'll find it will take about twenty-four hours to come with the rest of the atmosphere. Then it'll be safe for you all to go above. Good luck to you, Bruce and Freida. I feel I've paid the debt for the scandalous way I treated all of you when that dog virus got the better of my bloodstream. When the little lady grows up she'll marvel at some of the things we've done. Try not to paint me too black to her. I'm not so bad when you get to know me. Believe me to be, your sincere well-wisher—Jan Eberhart."

Bax lowered the letter and looked back at his two young friends. Again his eyes moved to the infant, then to the window through which he could see files of men and women who were already heading for the surface elevator.

Somehow to Bruce and Freida he looked symbolic as he stood there with the cold-light radiance etching into sharpness his powerful bearded profile and upright figure. He looked much as Moses probably must have looked when he at last had led his trusting followers to within sight of the Promised Land.

CAN YOUR SCALP PASS THE

\*F-N TEST?



\*The Famous  
Finger Nail Test

1 "It's F-N, the test for men!" Scratch your head—if you find dryness or loose dandruff you need Wildroot Cream-Oil. Buy the large economy size.

YOUR HAIR CAN LOOK  
LIKE THIS WITH NEW  
WILDROOT  
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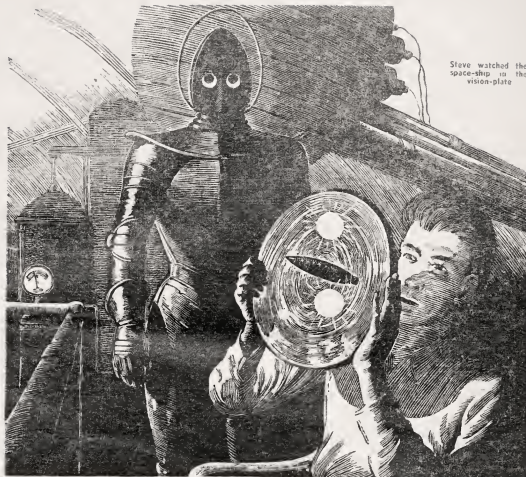


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Steve watched the space-ship in the vision-plate

## INCIDENT ON CALYPSO

By MURRAY LEINSTER

*Stranded on a strange satellite, Steve Baring discovers robots can sometimes be more human than human beings themselves!*

**S**TEVE BARING didn't expect to find human—well, call them humanoid—footprints on Calypso. He didn't expect to find anything. He'd expected to land there and die when his air gave out. The automatic pilot of his space-cruiser had jammed on four gravities acceleration when a short-circuit developed somewhere in its inwards, and when the main fuel-tanks were empty and Steve could stir from the flat of his back, he had only his emergency fuel left.

He was then well past the main asteroid belts—he'd been heading for Mars, originally—and speeding for outer space like a bat out of hell. He simply didn't have enough fuel to stop and come back. So he edged over to use Jupiter's mass as a brake, spent lavishly what fuel he did have left, and came in for a landing on Calypso with just twelve hours' drive at one gravity acceleration left to him. Which was just about enough to enable him to take off again and be sure of falling into Jupiter itself. As a matter of purely illogical

preference, he decided to stay and die on Calypso.

He had no hope of any sort. Calypso had been surveyed back in 1982 and offered no inducements for further exploration. It is four hundred million miles out from Earth, it is in Jupiter's gravitational field, and it is airless. Which last means that its surface is all pock-marked with ring-mountains made at the same time as those on Luna and Io by that unthinkable mass of stuff that barged through the solar system a hundred-odd-million years ago. Nobody else would be turning up on Calypso to rescue him. He was through when his air gave out. Finished. Period.

But then he saw the footprints.

His cruiser was lying slightly askew not far from the riven cliffs of a ring-mountain's outer perimeter. Steve had settled down, eaten a fairly hearty meal—he had more food than air—and tried to savor the fact that he was just as dead as if he'd hit a planet head-on at a hundred miles a second and was already reduced to his constituent atoms.

He found himself stonily calm. He even smoked. But time passes slowly when you're newly quick and dead at the same time. He went restlessly to the ports of the cruiser to stare out.

He saw the monstrous disk of Jupiter, coming up past Calypso's irregular horizon. Opposite was the high wall of the nearby ring-mountain. Other ring-mountains in other directions. Pits, where smaller things had struck. Craters within craters, and desolation as complete as that of Luna itself.

The sun was a small, fiercely flaring spot of light. Stars were clearly visible. The ground was simply shattered talus, loosely filled in with the dust which had settled slowly in airlessness after that insensate, incredible bombardment from the farther rim of space.

But then, in the dust at the very base of the ring-mountain cliffs, he saw a single line of regularly-spaced depressions. They were regular footprints, as of somebody walking. But humans do not walk on low-gravity terrain! The odd, skating gait which men use on Luna and the other lesser satellites does not leave tracks like that.

Steve stared blankly, smoking. Once he made an irresolute movement as if to turn a scanning telescope upon them. But it was hard to think of any action as worth while when everything is futile, when you're simply waiting until your air gives out and you die.

**W**HEN his cigarette was finished he shook himself and got into a space-suit. He went out the air-lock, stared about him for a

moment, and loneliness hit him like a blow. He was actually the only human being in two hundred million miles. But he swallowed and went toward the cliff-wall. He moved with the finicky skating motion appropriate to Calypso's low gravity. It is not a series of bounding hops, but something much more practical. He made the necessary gradual halt and the tippy-toe approach to the line of depressions.

They were footprints. They were narrow, and they were arched, and they had not been made by any space-boots that humans ever wore. There were no toes, but there was a heel, and they looked as if they had been made by something very like a human shoe, only of course they hadn't. They were absolutely distinct. They looked perfectly fresh. Steve felt a moment's wild flare of emotion before common sense told him that in airlessness a footprint will remain fresh forever.

Then he shrugged. He could tell the direction of motion by the sidewalls. He followed it. He had nothing to lose but his sanity. His life was already gone. He set off in the direction the footprints led.

They went on sturdily for miles. Once Steve looked up and realized that he was out of sight of the cruiser. There was no familiar formation in view. He felt a little flicker of apprehension. Then he grinned wryly. His own tracks and the ones he followed would be a guide back. And if he didn't get back it wasn't important.

The footprints rounded a place where a column of rock—thrown out in the formation of a crater—had fallen upright without breaking. It made a sixty-foot, irregular monolith. The footprints skirted it. Other footprints of precisely the same sort came from a new direction and joined the first set. They took a new line and headed for the monstrous wall of a mountain. A third set came in a mathematically straight line and joined them. The three went on. An opening loomed in the cliff. Yet more footprints came along the cliff-face and entered. There was darkness within.

Steve hesitated. He looked at the sky. Jupiter was still only a quarter-way across the horizon, though the sun was low down against a jagged mountain-scarp. He turned on his helmet-light and went doggedly inside.

Before he was actually within the cliff he saw everything that he ever discovered in this spot. There were six things in the shallow cave. They were metal, and they were the things which had made the footprints, and they were utterly motionless. There was no dust here, of course. There had been no air to swirl it in. The six things sat—there is no other word for it—in something

like a circle. And that was absolutely all there was in the cave.

The things themselves were plainly robots with curiously android bodies, two legs which ended in gracefully formed feet, and two arms. There was a head with a small, gracefully curved rod bent above it, like a receiving or transmitting antenna for very short radio waves. There were eye-spaces which were definitely not fitted with scanners. And the robots in their entirety had the peculiar, satisfying cleanness of line of an object which is perfect engineering. Like a suspension bridge or a race-horse, or a perfectly streamlined atmospheric plane.

They sat in a circle, seeming to regard each other. They might have been sitting there for one hour or for a million years. On Calypso, without atmosphere, metal does not rust or apparatus deteriorate.

Steve stared at them for a long time. They were quite impossible. Then he suddenly moved forward purposefully. From one standpoint, nothing that he could do was worth while because nothing could change his fate. If he took one of these robots back to the ship, though, and examined its workings, he would at least have an occupation. He might keep himself sane.

He looked at all of them and heaved one to his shoulder. Examination might tell where it came from. At least it would be a sort of technical solitaire he could play until his air ran out. He had no faintest idea that the robots could affect his personal future, except by providing a sort of game of patience he might play like any other condemned man.

He went back to the space-cruiser, pleased with the robot as a thing to investigate, but nagged by the fact that he was here on Calypso to die, and nothing else really mattered. He left the robot in the air-lock for a while. A puddle of furiously boiling liquid air formed about its feet as air filled the lock. The robot had been at the normal temperature of Calypso—say eight degrees absolute—and it took time to warm up. But presently Steve carted it into the main cabin and set to work to find out what made it tick.

**I**N ten minutes he knew he was looking at the absolute perfection of engineering design. Half of it was unintelligible, of course, but the thing had muscles, which were of flexible plastic with a magnetizing coil about them. They shortened in exact proportion to the magnetizing current. It had eyes which were not scanners, but lenses focussed directly on a flat close spiral of infinitely fine wire. It had what must have been tactile nerves which were almost microscopically small variable-resistance units.

The whole interior of the robot was con-

trived to slide out as units, once the torso was opened, whether for examination or for replacement. The power was undoubtedly electric and it was generated by a thermo-unit Steve could not begin to understand.

He spent half a Calypsonian day in mere examination, being careful to remove nothing. It was absorbing. It was fascinating. He discovered an enormous number of things he could see the use of, but whose workings he could not fathom. In the skull-case, for example, a thick sheath of fine wires from all over the robot led to a mass of black substance with a faintly visible external pattern of crystal-outlines on it. It was apparently the coordinating factor for the operation of the robot. There was a minute bit of apparatus with a recognizable variable condenser adjusted by a tiny "muscle". That must be a short-wave radio unit for communication.

In spite of these mechanical details, however, the robot had an extraordinarily man-like look when it was closed up again. The head was not round, but a laterally flattened ovoid, set on a turnable neck, with the highest part at the rear. But for its slender gracefulness, the robot might have been taken for a suit of golden armor, designed by a genius for an impossibly wiry human being. And it was small. Its total height was under five feet.

"Whoever designed you," said Steve warmly, "did a job of work! I understand about ten per cent of your works! If I had you back on Earth, we'd make some real machines!"

The thing was motionless. But it looked amazingly human. Erect, it would have a gallant briskness in its air.

"I'm going to see if I can't start you going," said Steve suddenly. "You can't do any harm, anyhow!"

Power was derived from a thermo-generator, far ahead of anything similar that Steve knew of. It was the logical power-unit for a robot, though. No battery will store as much power as its own weight of fuel will yield. Steve had seen where fuel from a tiny double tank had been fed through a hair-like capillary tube to what must have been a catalyzing chamber.

He set to work with a tiny brazing-torch and a wisp of platinized asbestos. An hour later he carefully funnelled almost a full pint of rocket-fuel into the robot's tank. With a platinum catalyst, the temperature attained would be relatively low and the efficiency ridiculously small, but it should work. He made as careful an adjustment as he could and closed the torso.

The golden figure stirred.

Its arms and legs shifted from slackness to something like tenseness. The head came

around. The robot, in effect, sat up. It looked at him, and all about the cruiser's cabin, and then sharply back at him.

"Hello!" said Steve, grinning though his heart pounded oddly. "I'm Steve Baring. Who are you?"

The golden figure made no sound. It suddenly occurred to Steve that he had seen no signs of either hearing apparatus or of sound-producing means in the robot's works. For a machine designed to operate in airlessness, of course, sound would not exist.

"Oh-oh!" said Steve. "You don't talk. Want to look around?"

He stood up. He beckoned. The golden figure stood, with a complete effortlessness that was grace itself, Steve led the way to a port and pointed. The golden figure tilted its head and stared out. It looked back at Steve. It was extraordinarily like a living thing. There was no jerkiness in any movement. There was no clumsiness.

"If you are remote-controlled," said Steve, "the lad who's running you knows his stuff! But somehow I don't think you are. Let's look around."

He led the way to the control-room. The robot followed, sure-footed and light upon its feet. Steve halted suddenly. The robot moved to one side to give him space to move. It looked from him to the instruments and to the star-map. It regarded the star-map steadily for several seconds. It was nearer the door back into the cabin, and when Steve moved toward the door it stepped aside to let him lead the way. It was incredibly like the courtesy of a reasoning being. Steve jumped a little.

HE did not know whether he felt idiotic or frightened, but either sensation was preferable to continued contemplation of his predicament as a castaway on Calypso. He led the way to the tiny engine-room. The robot followed with light, sure steps.

It was glittering golden metal. It was all graceful smooth lines and strictly functional curves. It was a thing of beauty, with the crest-like metal spur which must be a radio antenna, giving it a trace of cockiness that was irresistably appealing.

It scrutinized the drive, its twin vision-devices moving back and forth among the fuel-pumps, the catalyzers, and the field-generator which turned the catalyzed but still relatively inert organic compound into the continually detonating stuff which drove the ship—when one had enough of it to count.

The robot looked, but always it paid close attention to Steve. It was so lifelike that it actually had a manner. It was absorbed, it was brisk and it was—well—human.

"I'd give a half hour of my oxygen to know how they made that black stuff in your

brain-case," Steve mused.

He crossed the cabin and took out a volume of the Celestial Pilot with its orbit-constants for all the larger bodies of the solar system, landing-ports and regulations for the different planets, and photographs of all moons and most of the asteroids from every possible angle of approach.

"Your eyes ought to take this stuff," said Steve. "Let's see if I can get a reaction out of you."

He flipped the pages to the photographs of Calypso and pointed outside. The robot regarded the pictures attentively. Steve pointed out the photographs of Jupiter, recognizable from its huge disk overhead. Then he turned to a map of the Jovian system of satellites.

The robot looked up at him. With a curiously tentative pressure it took the book into its own hands and fumbled with the pages. It caught the trick of turning them and went through the entire pilot from beginning to end, disregarding the text, but eagerly regarding the photographs and maps.

Steve sat down. He lighted a cigarette and smoked reflectively, putting the lighter on the table beside his chair. He watched the robot with a curious mingling of pleasure and wistfulness.

"Fella," said Steve wryly. "You intrigue me. You can't do me any harm because my killing's already attended to. You can't harm other humans, because you can't get off Calypso with what fuel's left in this ship. And anyhow, the stuff in your fuel-tank will run out presently. So you and I can be chummy. I need a friend to chat with, right now. You're elected."

The robot looked at him, having seen his movement. It put down the book and waited. Steve grinned wryly again.

"Maybe you know some games?" he asked humorously.

The robot looked at the bookshelves, reached out, took a book and offered it to Steve with a quaint air of asking permission.

"Go ahead!" said Steve. "Maybe you're only a glorified set of clockworks, but I like your manners. Wait a minute, though! That's a novel, with no pictures. I'll find something."

He hunted. He found a suitable book. He opened it and fumbled in his pocket for a cigarette. The robot crossed the cabin and came back with the lighter he'd put down beside his chair. Steve's jaw dropped.

"Now, what the devil! You're human!"

He showed the robot pictures. Once or twice he sketched diagrams—talking busily the while—to make some illustration clear. Presently the robot seemed able to go on by itself. Steve sat back and watched with a sort of quasi-parental pride as the robot looked at pictures. . . .



He fell asleep in his chair, while pondering the problem of how to establish two-way communication with his mental protégé. So far, it was only one-way. He could tell the robot things, in a limited way, but the robot could not communicate in return.

**W**HEN he awoke, the robot was gone. And on the table beside him was a tiny bit of copper tubing with a wisp of platinized asbestos inside it. It was the improvised catalyzer he'd spent an hour on the day before, to fit the robot's thermo-generator to use rocket-fuel.

"Jupiter!" said Steve sourly. "That dummy figured I must've opened him up and fueled him, so he opened himself up to see. And he didn't like my work and took it out and went home."

Then he heard the airlock. It was being worked with precision and exact knowledge. There were footsteps on the metal plating. The outer door closed. There was the soughing sound of air admitted.

The robot came lightly into the cabin, clothed in mist. It carried a round, flat object in its hands. It regarded the frosting which formed upon it because of its temperature, and looked at Steve and made what could only be described as a deprecatory gesture. It put the flat object down and waited patiently.

"You've been out a long time!" said Steve, growling in spite of an illogical elation at the robot's return. "You had to, to get that cold! You should've used a suit."

But he was extraordinarily cheered. He was in the almost unthinkable situation of a man with no purpose and no plans. He could have none. He was waiting to die when his air ran out. So the robot was companionship or it was nothing. He stood up and looked at the flat thing the robot had brought.

"An apple for teacher, eh?" he growled again. "Let's see what it is."

He turned a heater on robot and flat object together. In minutes the frost vanished from both. But it did have a tendency to return as the unwarmed inner mechanisms took heat from the outer surface.

The robot pointed to the flat thing. Pictures formed under a transparent dial. It was a vision-plate; a television receiver. And it showed Steve's face, speaking. He wasn't speaking. It showed the pages of the Celestial Pilot being turned, one by one. They weren't being turned. Then it showed Steve, without a space-suit, walking on the airless outer surface of Calypso. He wasn't. He hadn't.

"Good Lord!" said Steve explosively. "I get it! I think in words, and short-waves will carry 'em. You think in pictures, and short-waves will carry them too! I get it! We talk two-way now!"

He settled down zestfully to talk with the only companion he could possibly have before his air ran out. Talking was an involved process, involving sketches and hastily-looked-up photographs on Steve's part, and pictures coming into view on the flat dial, on the part of the robot. It probably should have resulted in a marvelously educational technical session for Steve, but instead it brought the unfolding of a story.

It began with the picture of a planet, which was frost and ice from pole to pole. The pale, bluish light of a distant sun played upon it faintly. But that picture melted into another, of a snow-clad city of such infinitely graceful lines and such perfect grouping of masses that it was breathtaking. And that, in turn, melted into other pictures within the city, which was peopled by brisk, gallantly erect and lightly-stepping metal figures such as the one who now stood beside Steve Baring.

There were flying things which descended swiftly to the city, and others which took off and went away, and then a swift panorama of planets upon planets, and suns upon sun, and brisk bright metal figures everywhere, but always the visiscreen image returned to the frozen planet and the city which had been shown first of all.

Then there was a picture of a small object alone in space. It was a space-ship, and it moved, because the pattern of stars behind it changed slowly. But presently it wavered upon the screen. It ceased to point steadily in one direction. It careered crazily about among the stars. It made monstrous swoops and cavortings. And then—superimposed upon the image of the crazily darting ship—there came a picture of a giant double star, its components seemingly motionless. The twin stars moved visibly, faster and faster about each other until their movement in their orbit was a mere blur, while still the space-ship flung itself crazily about.

**T**HE motion of the phantom double-star ceased, and the space-ship was seen to be tumbling slowly and purposelessly through space.

"That first was your home planet," said Steve, nodding. "And you're telling me that the controls of your space-ship went haywire, just like mine, and the ship was acting up so crazily you couldn't control it for as long as it took that double star to spin about itself all those times. . . ."

He felt that he had failed to notice something. But the pictures began again. He saw inside the space-ship, now. Six space-suited figures regarded utterly cryptic machinery and worked precisely upon it, repairing it, evidently. Then one of them opened its torso and removed the half of its own fuel-tank.

It applied that tiny tank to a larger tank beside the contrivance just repaired.

A picture showed the space-ship moving steadily. Another figure seeming to disembowel itself to provide fuel for the ship, and still others. Then the space-ship came down in a clumsy landing on Calypso. It was a bad landing, a crash landing. The space-ship buckled and spouted odd parts.

Six golden figures spread out from the wreckage, desperately searching. After a long time they met again. They had found nothing. They entered a shallow cave beside a monstrous irregular monolith. Then the screen ceased to move, with six golden figures seated in the cave.

"You got control again," said Steve. "when the fuel in your main tanks ran out. Like me. But you had to use the stuff your bodies run on to power it to a landing, and Calypso was the best you could do. You must've figured it mighty close, to crash-land like you did. Then you couldn't take off. Again like me. So you sat down and—well—died, like I'm going to do. Only I came along and brought you back to life."

The robot looked at him. Steve said sourly: "And now you're asking me to wake up the rest of your friends, huh? I'll think about it."

He felt a curious, sombre jealousy. He had no plans. He could have none. He could only act upon impulse, because reason had no sense to it now, and he wanted company for his lonely last hours. Now, with one robot active, he had company of a sort. If he fueled all the rest, they would be company for each other, but he would be an interloper. He would be left out. He would be more lonely than before, because he would see these brisk metal figures in a companionship he could not share. So he was jealous.

He rather anxiously brought out a vision-record and put it on the projector to entertain the robot who was his guest. The golden figure watched intently. When the first record was finished, it watched hopefully for another. It watched the insertion of the record and the starting of the projector. When that was ended, it briskly changed to a third record without fumbling.

"Jupiter!" said Steve. "You've got brains! A robot wouldn't've thought of bringing a visiplat to talk with! But you are a robot!"

He fumbled for a cigarette. The robot handed him his case. There was no hint of servility in the act. It went back to the watching of the vision records.

Steve felt an angry resentment within him. He had wakened the robot to life, and in a sense it was at his mercy and would share his fate. He would live while he had air, and it would live while he supplied it with fuel. When he died, it would die. It was

reasonable enough that it should devote itself to him. But it must feel an added loneliness because it could have the companionship of its fellows, which Steve denied it.

Steve said "Jupiter!" in a disgusted voice. He got up and climbed into his space-suit. He came back to the cabin to say, "Stay here!" and reinforced the command with gestures. He went out the air-lock and over to the line of footsteps he had first followed. He followed them for the second time.

"Sentimental fool!" he muttered. "He's a machine! A machine can't be lonely! I'm giving him a personality like people do with dogs and babies!"

But he went on because reason was no longer reasonable. In his situation, only impulses had meaning, because only impulses made a difference. He knew where he was headed for, and the way to the irregular monolith and the shallow cave did not seem long.

When he saw the asymmetrical opening of the cave he felt an absurd but pleasurable warming of his heart. He was being absurd, getting a machine to be company for another machine. But he was going to die and he felt uncomfortable at the thought of being unkind even to a machine.

He reached the shallow cave. He turned on his helmet-light. And the cave was empty.

**F**OR a moment he was shocked numb.

Then came a fierce anger. He saw the whole thing at once. The robot in the space-cruiser had gone out the airlock only partly to get the vision-plate it had brought back. Essentially, it had gone out to share its fuel with these others! And it hadn't been alone or lonely. All the time it was with him, it had been in communication with its fellows by short-wave radio!

He swung out and came out of the cave, seething. He had only to look at the ground to see where the other robots had gone. He knew, in any case. Where had the vision-plate come from if not from the wrecked space-ship? Where had the robots gone, if not to the same place?

Steve made for that space-ship. He knew how to find it. He followed the six fresh sets of footprints in the dust of Calypso's surface. He used the skating gait in which a space-suited human being seems to glide just above the surface with a sort of magic ease. He moved swiftly.

He saw the space-ship while still a mile or more away. It was exactly as it had been shown him in the vision-plate, but it was no longer smashed. Five brisk, graceful figures moved busily about it. They put shattered plates together, and something glowed fiercely along the jagged line of the break for the barest fraction of an instant and the plates

were whole again. The ship had been wrecked. Markings in the dust told of fragments flung here and there. Those fragments now were gone. They had been fitted back into place.

Steve came up seething to the scene of activity. The five golden figures turned to face him. They were impassive, of course, but one moved as if to allow him a clearer view of the space-ship on which they worked. He had the feeling of an elaborate courtesy extended to him. His rage deepened. He felt that he was being patronized—and by robots!

"Very nice!" he snarled within his helmet. "Make fun of me, let that partner of yours kid me along to get the trick of finding more fuel and fix up your own ship! But what good will it do you? There's not enough to do you any good! You don't know that!"

He found a door leading into the ship. He stalked in. His helmet-lights showed the interior as the very perfection of functional design. Everything within him that was engineer or artist responded. But he raged.

The robots followed him in, politely. They made way for him without servility. One of them pointed as if proudly to the focus of all the design within the ship. It was a machine whose principle was inscrutable. Its function, though, was plain. It was the space-drive.

The few visible parts had that beautiful precision of workmanship that a machine which is both simple and efficient must have, and an insane jealousy came to Steve. This ship and that machine and these gallant golden figures were the products of a civilization Earth could not match. He could not believe that his own helplessness for lack of rocket-fuel had not been understood and discounted by the metal men. They had a purpose now. He had awakened one, and that one had awakened the rest, and now they prepared to return to their home planet, while he would remain behind to die.

He was jealous because he counted as nothing, either to the slender figures here about him, or their fellow in his own space-ship. He was jealous because they moved in brisk and comradely companionship, with apparent certain hope, and he was lonely to the brink of madness as he waited to die.

Since he had given them life and hope, he could take it away. There was a massive bar of metal lying beside the space-drive. He seized it. He raised it in a savage, hate-filled swing, to destroy the space-drive utterly.

And he was helpless. Mechanical muscles move more swiftly and more strongly than human ones. Two of the metal men held him fast. Without effort. Without even any appearance of resentment. Just as they would have restrained a child.

He struggled, while a choking maniacal fury swept him, beside which despair was calmness. He felt the metal bar wrested from his space-gloves in a gentle withdrawal.

**T**HEN there was stillness. The five slim metal figures looked at him. They looked at each other, and Steve hated them because they could communicate with each other and he knew nothing of what they said.

One moved away. He returned with a flat plate which was the duplicate of the one that had been brought to the space-cruiser. He held it before Steve. A picture formed on it.

It was a picture of Steve in the space-cruiser, putting rocket-fuel into the tiny double tank of the first robot's torso. It was the happening which had meant the revival of all six.

That picture faded, and another formed. This was of Steve striking savage blows at the mechanism now before him with the metal bar. That faded in turn and a completely arbitrary symbol took its place.

Suddenly, he was released. One of the five metal men handed the metal bar to him. All of them stood back and looked at him. It was so astounding a thing that it shocked him back to calm.

"You mean," he growled furiously, "I waked you up, so I'm entitled to smash your drive. It's an equation, eh? That's what that symbol meant. All right—"

He raised the bar. None of the metal men stirred. They waited to see their space-drive smashed.

Steve glared at them and flung the bar to one side.

"You know where you can go!" he said bitterly. "All of you!"

He stalked out of the space-ship. None of the metal men followed. He turned and stared back at it, then headed for the cruiser.

On the way, his bitterness increased. He began to see many things. His companion in the space-cruiser had discarded the tiny catalyzer he'd built, because it was inefficient. With sudden startled insight, Steve awoke to the sort of efficiency that would enable the metal men to fuel their ship for operation with the contents of such minute reservoirs of fuel. What would enable one metal man to share a pint of fuel with five companions, and have power to weld and repair metal. . . .?

The detonation of a single molecule of rocket-compound will raise the temperature of that molecule close to the hundred-thousand-degree mark. And it was not difficult to envision—though Steve could not design—a force-field which would raise a molecule already at that temperature to disintegration temperature.

Ordinary matter would never reach such a temperature, which is usually found only in suns. Only rocket-fuel or something similar, fed molecule by molecule into a tiny disintegration chamber, would, by its detonation, acquire a starting temperature the field could carry to the breakdown point.

The metal men, then, had atomic power, using an organic-base fuel and working on individual molecules so that they could make power-units for individual robots—or for space-ships or giant machines which could shift planets.

"Fine thing!" raged Steve. He'd given the first robot a pint of rocket-fuel. Used in atomic-power generators, that would fuel all six for ten thousand years. No wonder they could afford to let him smash their space-drive if he wished! With ten thousand years in which to repair it. . . . He'd be dead in less than two months. They could take the space-cruiser apart, inch by inch, and find the rocket-fuel he had left. They would have all the time there was. . . .

"I can set it off!" snarled Steve. "Then let 'em try to laugh at me!"

He moved onward, vengefully. He reached the space-cruiser.

His companion, the one he had thought of as a friend to comfort him until his air was gone, that companion rose and looked at him.

Steve got out of his space-suit, scowling. The slender golden figure reached for the flat vision-plate. He held it out to Steve. Pictures formed on it. Steve would not look at them.

"Take it away!" he said bitterly. "You've been laughing at me! I don't want to see what you've got to say! Get out! I'm going to get rid of you!"

There were loose papers where the robot had been sitting. Looking at everything, it had found paper and notes in Steve's handwriting, and pens and pencils to write with. It had experimented, and it had been writing. Steve saw diagrams, each with a minute and beautifully executed sketch beside it to make it lucid.

"Going to amuse me, eh?" he snarled. "You're going to get out!"

He was jealous. He was lonely. He was bitter. And he was humiliated that the metal men had been prepared to let him smash their space-drive because he had brought them back to life. He went savagely into the engine-room. He wrenched at fastenings. He came back with two tubes of rocket-fuel, the amount that should be left over after the servicing of the ship past his death. He thrust the tubes angrily upon the slender metal man.

"Get out!" he raged. "You're not my friend! I won't be patronized by a pack of

clockworks! I won't let 'em feel superior! Take this to your friends and don't come back!"

He shoved the quietly yielding robot to the airlock. He thrust him in. He worked the controls which opened the outer door swiftly, wasting a lock-full of air.

**M**INUTES later he saw the robot marching sturdily across the desolate, airless surface of Calypso, carrying the tubes of fuel.

Steve drove himself to eat. He smoked, prodigally wasting his air. He coddled his rage, because there was no sense in being reasonable. He saw moving things on the flat vision-plate, but for a long time he would not look. Presently he yielded. He saw the robots' space-ship lift from its resting-place. He saw the ring-mountains of Calypso from that space-ship in flight. Then he looked down upon his own space-cruiser as it would be seen from above. It enlarged swiftly, as if the ship which saw it was descending.

There was an indescribable crunching vibration underfoot, and he knew. He scowled out the port. The other space-ship had landed close beside his own. Metal figures got out of it. One carried a burden, lightly. They advanced to the cruiser's airlock.

Steve stood still, frozen. He heard metal footprints on metal plates. The soughing of air. The metal man he had thrust out a few hours since came back—and another.

The second man carried a contrivance which looked remarkably like an ordinary metal bar, but it had been finished since Steve had planned to use it as a maul. Now it was a space-drive like the one on the robots' own ship, though smaller. It had been made while the repair-work on the space-ship was under way.

The golden figure which carried it moved assuredly toward the engine-room. The other made a somehow appealing gesture to Steve and offered the vision-plate urgently. With an attempt at cold dignity, Steve uncompromisingly looked.

Presently he swore softly.

"The devil! You looked at all my vision records, eh? You know what people are like. So you are people too! But we build houses to live in, and you build robots. And then we make cities for our houses to be in, and you make cities for your robots to occupy. Of course," he said generously, "you've an advantage in that you're not material, and you use that black stuff in your skull-cases as a way of affecting matter. . . ."

Then he paused. A moment later he said awkwardly;

"But, after all, we're not material either. We use the gray stuff in our skull-cases

to affect matter, too. Only our robots, our bodies, aren't as tough as yours. But we're pretty much alike. . . ."

The second golden figure came out of the engine-room, with a strand of compacted wires trailing behind it. It paid them out carefully and went into the control-room.

"You aren't a dummy, though. . . . If you were," said Steve, uncomfortably. "I couldn't accept a favor from you. I wouldn't be beholden to a machine! But since you're people, why, I can. So, thanks. Maybe when our two races get together we'll be friends. I hope so. . . ."

The other robot came out of the control-room. Steve knew exactly what had been done. A new space-drive had been attached to the old one, which served now purely as a mounting. A bare two ounces of rocket-fuel, included in the space-drive device, would drive his ship half a dozen times across the solar system.

From a man with a ship which was useless because it had only twelve hours' one-gravity drive left, he had become a man who'd given the robots means to cross the galaxy, and still had a ship more prodigally fueled than any other space-ship ever made by men.

He had, moreover, the design of the drive and the conversion-unit which made rocket-

fuel into atomic power. And his essential instruments had been connected to the new drive so that he could operate his ship exactly as before. He could drive the cruiser at three gravities all the way to the halfway point, and decelerate as recklessly, so that his air would be more than ample. . . .

"I guess," said Steve, "you'll be going on. If you had any queer notions about conquest by your race, you wouldn't turn me loose. So I won't worry about that! When you've taken off I'll start home."

The erect and gallant small figure before him could not smile, of course. It had probably understood little or nothing of what Steve actually said, but it had looked at a lot of vision-records. It knew a lot about human beings, now. It held out a metal, articulated hand.

Steve understood. He shook hands, and swore at the chill of the metal.

"Cold hands, warm heart," he growled. "All right, pal! Good luck on the way home!"

He heard the airlock doors operate, one after the other. He watched from a port as the ship of the metal men lifted and dwindled to a point and vanished.

Then he lighted a cigarette and strolled into his own control-room, to take off and set a course for home.

## "I'm Sorry—But I Am Under the Cruel Necessity of Ordering Your Deaths!"



THE face of the Uranian, Ru Ghur, assumed a look of sadness as he addressed Captain Future and the Futuremen.

Meanwhile, Captain Future let his hand fall idly upon a microphone. His fingernail almost inaudibly tapped the edge of the microphone. He spelled out a message in standard interplanetary code: "Ship taken—leader of radium raiders is Ru Ghur—"

Suddenly the Uranian saw what Captain Future was doing. "Get your hand away from that microphone!" he ordered sharply.

Captain Future realized the game was up. There was just one chance left, and he took it. Inside his jacket was his proton pistol. His hand reached for it with blurring speed.

Too late! Ru Ghur's atom-gun was already in his hand. He struck with viper-swiftness, downing Captain Future and ordering his men: "Don't kill him—yet. I want to question him. I want to find out just who he is!"

Is Captain Future's identity unveiled? Does Ru Ghur succeed in his sinister plans? Where are the strange space pirates based? These and other questions are answered in *OUTLAW WORLD*, a complete Captain Future novel by Edmond Hamilton that transports you to unknown ports of astonishing adventure.

COMING IN THE NEXT ISSUE

# THE SUPERMAN OF DR. JUKES

By FRANCIS FLAGG

*When a famous scientist gives Killer Mike, the racketeer, superhuman powers, the consequences are more than amazing!*

## CHAPTER I

### Human Experiment



HE WAS slim and of medium height, with the phenomenon of cold gray eyes in a dark face and under a thatch of black hair. His father had been an Italian immigrant and his mother a descendant of "dark Irish," those sons and daughters of old Erin in whose veins ran Spanish blood—the blood of the crew of the great Armada that Philip sent out in pride and pomp to subdue

Elizabethan England, that Drake and Frobisher scattered, and that storms cast away on the inhospitable shores of Scotland, and on the rock coast of the Green Isle.

Chicago had bred him, and in the Windy City he was known as "Killer Mike." He did not look the killer, but in his case looks were deceiving. As a matter of fact, he was as dead as a rattlesnake, but he struck only in the matter of business and never for the mere love of slaughter. Young, he was, under thirty, and personable, with the smatterings of a fair education. It was only when the "Big Shot," whose bodyguard he was, tried to put him on "the spot," that he left Chicago hurriedly. The Big Shot held organized gangsterism in the hollow of his hand and to attempt, openly, to live and function without his permission and protection was suicidal.

So the Killer had fled, conscious that the long arm of his erstwhile chief was reaching out to slay. East to Boston, and from Boston by steamer to Halifax. Here he breathed easily for a moment. But one night a shot stabbed at him through the dark so he sneaked aboard a train for Montreal. From Montreal he swung across the border to Detroit, and from Detroit zigzagged west to Arizona, losing himself in the vast armies of unemployed who rode freights. By this time his money was gone, his sleekness, and he wore frowzy overalls and a jumper. Lolling on the grass by the Fourth Street subway in Tucson, not knowing what moment he might be bagged by a policeman, an elderly gentleman with a large protruding nose accosted him.

"I suppose work is pretty hard to get these

days," he remarked.

"Yes," said the killer. He was properly suspicious of all strangers, but a cursory inspection served to show that there was no likely henchman of the Big Shot. The elderly man was well-dressed in clothes of a good cut and quality, but carelessly, as if clothes were of little importance to him.

"It must be hell on those poor devils with wives and families to support."

"I've no one but myself," said the Killer.

"But you need employment, I presume?"

"In the worst way."

THE elderly man studied him thoughtfully. "My name," he said at length, "is Jukes—Doctor Jukes. Ever hear of it?"

"No."

"Ah, well," said the Doctor. "it isn't quite unknown to science. I am by way of being a physicist of some reputation. My papers on—" he brought himself up with a jerk. "What I meant to say is that I am interested in certain experiments for which I need a human subject. Nothing dangerous, you understand—mostly a matter of routine. But still important." He stroked his chin. "I'm willing to pay a young man like yourself forty dollars a week for a few weeks' employment at the most. Food and lodging included. You would, of course, lead a secluded life under my supervision for the duration of the experiments. What do you say?"

## EDITOR'S NOTE



SOME stories are forgotten almost as soon as they are printed. Others stand the test of time.

Because "The Superman of Dr. Jukes," by Francis Flagg, has stood this test, it has been nominated for SCIENTIFICTION'S HALL OF FAME and is reprinted here.

In each issue we will honor one of the most outstanding fantasy classics of all time as selected by our readers.

We hope in this way to bring a new permanence to the science fiction gems of yesterday and to perform a real service to the science fiction devotees of today and tomorrow.

Nominate your own favorites! Send a letter or postcard to The Editor, STARTLING STORIES, 10 East 40th St., New York 16, N. Y. All suggestions are more than welcome!





The cold dark face of Killer Mike stared from the screen

The Killer thought swiftly. Here was an opportunity to drop from sight for some time to come, a sanctuary in which to rest up while recouping his pocket-book. The old boy was lying, of course—there must be some risk to the experiment—but not as much risk as dying of lead poisoning.

"All right," he said briefly, "you've hired me."

The Doctor smiled benevolently. "And your name is—"

"Brown," said the Killer without the least flicker of hesitation.

"Very well, Brown," said the Doctor, "if you'll follow me to my car—"

But the Killer shook his head. It was not likely that he was being observed, yet one never knew.

"Just slip me your address," he said. "I'll be around later."

Doctor Jukes' residence was out St. Mary's

road, in the foothills of the Tucson Mountains. Five acres of land were enclosed by a high fence of net-wire. Four buildings stood in this enclosure. The Doctor introduced the Killer to one of them, really a wing of the main residence, but only connected to it by a roofed passageway. This annex contained a suite of rooms which, if not luxurious—and the Killer was accustomed to a certain amount of luxury and refinement in his surroundings—were comfortably furnished.

There was a bedroom, bath and sitting-room, and a door led to a small patio or garden, some yards in extent, which was surrounded by a six-foot concrete wall.

"I believe you will find everything comfortable," said the Doctor.

A man servant, middle-aged, taciturn, prepared a bath, laid out shaving gear, and provided fresh linen and a suit of white duck that fitted the guest fairly well. The Killer wondered from

whence they came and, if he had known, might not have felt so easy in his mind.

As it was, he relaxed, and over a tastefully served meal studied his surroundings. Bars criss-crossed the high windows, he noticed, and when the servant finally went away by the passage door and left him to a magazine and a cigarette, the door automatically locked behind him. But these trifles failed to disturb the Killer. Of course the Doctor could not be expected to give every stranger the run of his place. He congratulated himself on his luck in finding as secure a hiding place.

The next morning he was made rather ill by the injection of a solution into his arm.

"You'll be all right tomorrow," said the Doctor. But every day there was a new injection, and a week passed before he felt himself. Then he picked up surprisingly. It was a quiet existence. He walked or read in the little patio and sunned himself. Sometimes the Doctor's assistant, a stout nervous individual of uncertain age named Doctor Burdo, walked with him, taking notes of his condition. He was an old school-mate of Doctor Jukes and devoted to his interests. All this he told the Killer in his pleasant inconsequential chatter.

"Doctor Jukes is a great man," he said. "Famous, a genius."

Day by day the Killer found himself tingling more and more with the zest of living. His wits seemed to clarify. He thought of a thousand ways in which he could have disposed of the Big Shot and wondered why they had never occurred to him before. Also his sight became keener, almost microscopic in its keenness, he thought, and laughed at the conceit. But nothing escaped his eyes. The little lizards darting up the wall, and the activities of certain small bugs and insects.

He spent hours watching them. His increasing ability to hear was almost uncanny—the creaking of the floor, the sighing of the wind, and a myriad of small things rubbing wings and crawling. He was not alarmed. He knew these phenomena were the results of the Doctor's injections. The assistant quizzed him about them, made interminable notes.

One day in the garden he turned on him with a swift movement, a movement almost as swift and as lithe as that of a panther.

"Ah, but I feel strong," said the Killer. He flexed his arms. "I feel as if I could lift you over my head like an Indian club."

**H**E CAUGHT the assistant playfully by the waist, and to his huge surprise—the assistant weighed nearly two hundred pounds—whirled him aloft like a feather. Once more on his feet, the assistant laughed shakily.

"I'll say you're strong."

That evening the assistant spoke at length to Doctor Jukes. The Doctor nodded.

"The experiment has been a glorious success. There's no need to carry it further. Give him the quietus in the morning."

The assistant hesitated. "Such a splendid fellow. It seems a pity to—"

"Come, come, Charles," laughed the Doctor. "No mawkish sentimentalism. Tomorrow," he said more seriously, "I am to meet Asbury, so I must leave the giving of the quietus to you."

The Killer was restless, his mind abnormally

active. For the first time he resented being locked in at night. He gave one of the window-bars a tentative twist and it came away in his hand. With the sinuous grace of an animal he swung through the aperture and dropped to the ground beyond. It was cooler in the gardens than in his room. His nostrils quivered with delight. The night was intoxicatingly odorous, filled with murmurous sounds.

For awhile he paced back and forth, but soon it occurred to him that he had never seen beyond the confines of the walls hemming him in. On the other side was the laboratory, and the quarters of the assistant. Why not surprise Burdo with a call? He scaled the wall with ease. The laboratory door was latched but not locked. Unfortunately, however, the assistant had chosen that evening to dine out.

Filled with curiosity the Killer struck a match and turned on an electric light. It dimly revealed a long room almost meticulously neat. White porcelain sinks set against the wall, and stands and shelves with orderly rows of test-tubes and bottles containing chemical compounds or cultures.

Beyond was still another room, and when he opened its door something moaned and flashed by him with a screech. There was a crash behind him. Turning, he perceived that the creature, a monstrous pink rat, had taken refuge on a shelf over a sink, upsetting a number of bottles in doing so. At his approach it leaped from the shelf and fled through the outer door into the night. None of the bottles were broken. As nearly as possible, he rearranged them in their niches on the shelf, and somewhat ashamed of his misadventure, returned to his apartment and went to bed.

The bottles were similar in size, their contents colorless as water and indistinguishable by the numbers over the niches in which they stood. A corresponding number was labeled on each bottle, but for the most part were small and almost illegible.

Still drowsy from the unaccustomed lack of sleep for it had been after midnight when he turned in, the assistant reached automatically and with hardly a glance, for a certain bottle. Unwittingly he filled his hypodermic with—not the lethal dose intended—but the pure, undiluted secretion, minute quantities of which the Doctor had been injecting into his patient over a series of days. And it was this solution he shot into the Killer's arm.

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## CHAPTER II

### *The Quietus*

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**T**WO men were seated in the uptown office of Joshua Jukes, famous surgeon and scientist. One was Doctor Jukes himself, slim, with well-spaced eyes and a towering balded brow. The other was not less a personage than Vincent Asbury, Secretary of War. In some circles it was more than hinted that he was Frazzini's man. The Doctor either didn't now this or didn't care. He was a scientist, not a politician. His own motives were clear enough. He had made

known his discovery to the War Department, offered his formula for sale, and as for the rest—

Vincent Asbury was speaking. He was a handsome man of fifty, with narrow, crafty eyes, and when standing carried his tall figure with noticeable distinction.

"You mean to tell me, Doctor Jukes, that this thing is possible?"

"Indeed, yes."

"But it sounds like a miracle."

"And one not to broadcast to the world. First my country—"

"Oh, yes, your country." Asbury carefully kept the smile from his face. "And if you can properly demonstrate your discovery, your country will reward you well. But how does it work?"

"That's rather difficult to make clear to the lay mind. But you know the glandular theory?"

"Slightly."

"Well, it's through the injection of extracts, of course. Certain ductless glands have a secretion lately analyzed which empties directly into the blood. This secretion is what keeps the nerves of the body normal and healthy. It has been ascertained that too little flow produces nervous depression, sciatica, rheumatism, while too much brings about that abnormal condition which is usually diagnosed as genius or insanity. Walters of England, and Swenson of Sweden, have made important discoveries in this field. Indeed their Fol-Fos extract is now being used to heal certain types of mental disorders. What I have told you so far is the secret of no particular scientist or country."

"But this other?" asked Asbury anxiously.

"Is. You must know that I have devoted the last ten years of my life to the same research work engrossing Walters and Swenson. Curious things in relation to ductless glands early claimed my attention. Some of my findings I published in medical and scientific journals, but others I kept to myself. First, because I had not substantiated them with the proper amount of proof; second, because I did not wish to be anticipated in the thing I sought to discover."

"But I have produced rats as large as cats, mice as large as rats, and other things which I had better not mention. Dogs grown into nightmares, rabbits that a little lack of manganese rob of the 'instinct' of mother love, and even of the desire and ability to mate. But enough. You understand that I worked, that I spared nothing in my investigations. Not even," said the scientist coolly, "men."

"Good heavens!"

"What would you? Some of them died, of course, and others went mad and had to be killed. But one must verify certain conclusions on the human. There is no other way. They were poor devils—martyrs to science, if you will. At any rate, they made possible what I have finally achieved."

Asbury made no audible retort, though he could not keep the distaste out of his face. Yet Doctor Jukes was right. The ethical value placed on human life is an uncertain thing. For reasons they knew nothing of, and that might not even concern them, he would send millions of soldiers to die and think little of it.

The scientist went on: "If one could handle

the process which caused an increase in secretion in the ductless glands I have alluded to, would not that open the way to speeding up every function of the human body? That was, at first, a wild surmise on my part. But consider that man is a creature of his nerves. The sense perceptions, the reflex actions, even speed of thought itself, is dependent on the nervous system. The glands speed up the nerves, the nerves every sense and faculty of the human organism, including that of mind. And mind reacting back upon the nerves and glands again, keys up every sense and organ of the human body."

"This was the basis on which I worked. Failure after failure but increased my determination to succeed. Finally I met with some success in the case of animals. Then it was that I used, and am still using men. No need to relate the successes and failures there. Even the successes it was necessary to kill. I see you do not like that, but consider—could I allow my experiments to be bruited around? After years of work I was intoxicated with victory. See this bottle? Ten drops of its contents is enough to raise the normal powers of a healthy man ten times in excess of what he possesses. There is fol-fos in it, of course, and a portion of adrenalin, and—but that is my secret."

THE habitual calmness of the great scientist returned to him. He placed the bottle carefully back on the desk and regarded the Secretary of War.

"Well, my dear sir?" he questioned.

Vincent Asbury said slowly, "I am thinking," and he was. He was visualizing a picked body of men with their physical powers raised to the zenith. What power could withstand them? His eyes narrowed. "If you can prove this secretion?"

"I can."

"Then listen . . ."

Doctor Jukes came from his interview with Vincent Asbury with a feeling that everything was well in the best of all possible worlds. He did not like Asbury, but money was to be his for further scientific investigations, and just in the nick of time, since his other resources had well-nigh dwindled away. Blithely he entered his home.

"Well, Charles?"

The assistant glanced at the clock. "I gave him the quietus at nine-thirty and never saw a man pass out so suddenly. I left him lying on the bed until your return."

The Doctor nodded. "I'll take a look at him before lunch."

He walked through the open passage. "A nice day," he thought, "but hot." Nothing warned him that he was making his last observation on the weather.

How strong the accelerating secretion injected mistakenly into the Killer's arm was will never be known, but it must have been tremendous. Had his system not been accustomed gradually to increased doses over a period of days, the results would have been fatal. As it was, the sudden acceleration of heart and lung action brought him to the verge of death.

Darkness struck at the base of his skull with the suddenness of a sledgehammer and he col-

lapsed into an inanimate heap. The assistant felt for his pulse, but the beat of it was so incredibly rapid as to register as no pulse at all. But the Killer was not dead, and during the hours he lay in a state of coma his whole bodily organization underwent a miraculous change. As suddenly as it had left him, consciousness returned and found him staring wide-eyed at the ceiling. Giddy, he was, and sick, but this soon passed, and in the moment of its passing Doctor Jukes entered the room and knelt by his side. The first thing the Doctor found remarkable was the heat radiating from the supposedly dead body and the flexibility of the wrist he took.

"What the devil!" he cried, starting up. "Here, Charles! The lad isn't dead." He stared at the widely glowing eyes. "You couldn't have given the quietus; you must have—"

But he never finished the sentence. Like a flickering shadow the Killer's hand shot out and took him by the throat. There was a sharp snap as the neck broke, and in the same instant the body hurtled the room to crash against the far wall. The Killer surged to his feet. He had heard the Doctor's words, understood the situation and all that it implied.

"Kill me, would he, the dirty rat!" The motion of the Doctor's body fascinated him. It seemed to loaf along at snail-like speed. In reality its transit through the air occupied not three seconds. But everything in time and space had altered for the Killer. The assistant running for the door seemed a figure shown on a screen by a slow motion-picture camera. The lifting of his feet, the bending of knees, in fact, every motion of flight, was almost painfully slow and measured. Each detail could be watched.

The Killer had seen pictures of animals running like that. Long-legged giraffes sailing gracefully over African landscapes—slender deer slowed up in their flight so that patrons in theaters might study their methods of locomotion. For a moment he was startled. Then working at lightning speed, his mind grasped the explanation.

For weeks they had been speeding up his bodily organization, and now, now—

He moved. It was done with such swiftness that one might be forgiven for comparing it with that atom or electron which is said to shift positions without any intermediate action. In mid-stride he caught the assistant. One brush of the hand. It was like pushing over a mannequin that refused to fall, save as a feather topples. Then bare-headed, and clad in but trousers and a soft-collared shirt, he was out of the building, the grounds, and striding up the road.

An automobile crawled towards him, a taxicab, doing twenty miles an hour. Now was the test, his own strength against that of the gleaming car. Deliberately he blocked its way. The driver screamed at the sudden materialization of this slender, dark-faced man. Almost wildly he bore down on the brakes, sought to swerve, but the yawning machine was brought to an abrupt stop that catapulted him over the wheel, that flung the white-faced man in the rear seat forward across his shoulders.

With one negligent hand the Killer held the taxi motionless while its engine roared under a shaking hood, while its wheels still bit impotently at the packed dirt of the road.

## CHAPTER III

### "Two Men Have Been Killed"

**W**HEN Doctor Jukes left Vincent Asbury, Asbury went to his apartments in the exclusive Green Hotel and dismissed his secretary and valet.

"I'll not be needing you, Robbins," he told the man-servant, "until dinner-time. You may have the afternoon off." He was in Tucson incognito and, save for one or two discreet individuals, unknown.

Assured of privacy, he placed on a table a dark case that looked not unlike the container for a portable typewriter and raised the lid. The case certainly contained a machine but not of the typewriter variety.

At first glance it might have been mistaken for a radio. Indeed it was that, and something more. In fact the contrivance represented the last word in radio-television devices, the invention of a great inventor who had sold it for a price—five million dollars to be exact. The inner surface of the upraised lid was a burnished screen. Connecting the device to a light socket by means of an extension cord, Asbury threw a switch and twirled a dial.

Instantly the room was filled with a sputtering noise. 302 M-9b, he spelt carefully. The sputtering fell, rose, died away. He leaned so that his face was fully caught by the light of a bluish bulb. The burnished screen clouded, clarified, and in it grew the features of a man.

"Hello," said a voice faintly, as if from an immense distance.

"Hello yourself. This Number Two speaking. Yes, Number Two. Is the Big Shot there?"

"Sure," said the faint voice. "He's been waiting for your call. Just a moment." The features faded, and in a minute was succeeded by those of a man whose face expressed ruthless power. The eyes were wide-set, with heavy lids, and even in this television picture, which gave no distinct colors, save white and black, you knew that they were greenish.

The cheeks were fleshy, the lips thick but well-shaped, and one cheek was scarred as if by an old burn. The newspapers of the world had broadcast that face. It had been shown in newsreels and magazines. A nationally known face it was, as familiar as that of the President of the United States, or of a movie star—the face of Frazzini, millionaire bootlegger, king of racketeers. It smiled genially now, showing a set of white even teeth.

"That you, Vincent?"

"Yes. I'm speaking from Tucson."

"How is everything?"

"I saw Doctor Jukes about that discovery of his he offered the government—through me." He laughed softly. "Of course he thinks he's doing business with Uncle Sam."

"And the discovery?"

"It's a wonderful thing. Listen, Frazzini, a shot of it would make our boys irresistible." He went into details. "The effect wears off in time, but while it lasts—"

"You made him an offer?"

"Of a million cash—with a hundred thousand yearly for further research work. He understands that the deal is secret—for reasons of State, ha, ha!"

Frazzini spoke incisively. "See the Doctor at once and tell him you will have a government official and two secret-service men call on him tomorrow for a practical demonstration. I shall leave here with Landy and Cococetti almost immediately. Reserve rooms for us at your hotel. Understand?"

"Yes. On the top floor, I suppose? Chicago is twelve hundred miles away as the crow flies. That means you will get in—"

"In twelve hours at the outside. Have everything arranged. Good-by."

Thoughtfully Vincent Asbury removed the connections and closed the case. Lighting a cigarette he moved over and stared unseeing out of the window. Frazzini could make him president of the United States—and would. But nevertheless he irked under the gang chieftain's control. Given the opportunity, he would blot out Frazzini—like that. But right now he needed him, and the organization he controlled.

His mind busy with all its torturous thoughts, he called up the desk and asked that a taxi be summoned. At the same time he reserved the rooms. It was summer and not difficult to get the location desired. Descending, he took his seat in the taxi and giving Doctor Jukes' address, sank back with closed eyes. Up Congress the car sped, then north, and then west again. Suddenly the car stopped with a jerk and he was hurled violently forward into the back of the driver. The shock nearly dislocated his neck.

"What the devil!" he cried when he had recovered his breath. "What does this mean?" and then paused with mouth half open, staring into a dark expressionless face and cold grey eyes!

Every atom was rioting in Killer Mike's body. By almost imperceptible degrees the potent solution was increasing in intensity. There was no reckoning how fast the Killer's faculties were functioning. He laughed sardonically, an eerie laugh.

"Ha, ha! If it isn't Number Two!" Even in that brief second of stopping the car, and while Asbury was yet engrossed in his own thoughts, the Killer heard him thinking. Yes, heard; for him it seemed that Vincent Asbury had been talking aloud. The Behaviorists claim that all reasoning is a matter of sub-vocalization, that literally one does talk to himself when thinking. To the ears of the Killer this subvocalizing process was audible as sound.

**HE HEARD** the war secretary mention the Big Shot's name, the Doctor's, think of the coming of Frazzini, mouth over his own plans, ambitions—and all in a fraction of time quite long to him. The taxi-driver, knocked limp for the moment, recovered with a curse, and took his foot from the gas.

"Hey, you!" he bellowed, lunging at the Killer with intent to grab him by the collar. "What do you mean by this, hey?"

The Killer watched the lunge with impersonal interest. Bah! The fellow was slow! He seemed to float through space, split seconds being minutes. The killer brushed him away lazily, and watched him going backward in the same lei-

surely fashion to collapse in a heap from which he did not stir. But to the war secretary the action had taken place with almost unbelievable swiftness. He had recognized Killer Mike, as Killer Mike had recognized him, and knew that he was condemned by the Big Shot and his life forfeit.

In the very instant that the driver surged forward he drew his automatic and fired. But the Killer's eyes caught the gesture. Without trouble he avoided the bullet and threw out his fist. Struck by what he never had a chance to see, Vincent Asbury sagged back.

Again the Killer laughed, an eerie whisper of a laugh, and turned and was gone so swiftly that to the staring occupant of the second-hand Buick that had pulled up behind the taxi, and to the man in the office of the greenhouse bordering one side of the road, he seemed to flicker and vanish into nothing. The taxi stood with throbbing engine.

"What the devil!" said the driver of the second-hand Buick, rubbing his eyes. Then he clambered from his seat and peered into the taxi. At what he saw, he gave a gasp of horror. The man from the greenhouse came running across the road.

"What's the matter?" he panted.

"Matter—matter— Can't you see what's the matter?" He pointed wildly at the bloody features of the taxi-driver, at the horribly crushed in skull of the secretary of war. "That's what's the matter! Murder! Two men have been killed!"

But the Killer did not hear. He was gone like a wraith. The world seemed to stand still as he glided along. The scent of mankind was heavy in his nostrils—but above all the individual odor of Asbury. It hung in the hot air like a thin, evil trail. It smelled, thought the Killer sardonically, like one might expect the crooked, oily mind of Asbury to look. It was not difficult to follow. In a few minutes he was at the hotel.

The clerk did not see him, nor the bellhops sitting in a braided row. The fat man coming down the stairs to get the exercise his doctor ordered, wondered what it was that brushed by and nearly sent him sprawling. He could have sworn that a voice said, "I beg your pardon," but no one was in sight. Much shaken in mind and body he waddled to the elevator shaft and rang the bell. Blast the doctors! It was a hot day and too much exertion made a man feel queer.

Still following the trail, the Killer came to the correct door and opened it by the simple expedient of pushing. Yes, there was the television-radio. His face twisted into a deadly grin. Every atom and fibre of his body was dancing. Put him on the spot, would he? Why nothing could touch him now, nothing—neither men nor gun! And if he wished—

With a swift, lithe motion he opened the television case.

In the underworld of America they spoke of him with bated breath, his friends admiringly, fawningly, his enemies bitterly and with curses. Rumor had it that he had started his career in a gambling house. When Big Tim was chief, he had been his favorite guard. When Little Arne broke through Big Tim's defense, those in the know said that Arne had first fixed it with him. If that were the truth, it hadn't kept him from driving past Little Arne's flowershop one day

and riddling him with lead.

He was ambitious, ruthless, and with more than a touch of organizing genius. The result was that where other gang leaders went to the graveyard or abroad, he built up a vast illegal business of forty millions a year. Over his immediate followers he ruled with an iron hand, the whilst he wiped out competition with bribes—or a machine gun. He was king, despot, the one and only chief of racketeers, Frazzini, the Big Shot, the most feared and powerful man in the country.

His Chicago home was a fortress. It stood on the top of a skyscraper. The approach to the roof was cunningly guarded. Frazzini knew, none better, that there were envious souls who would like to bump him off—some for the honor of doing it—and some to step into his shoes. At the particular moment we see him, he has turned from speaking to Asbury on the television-radio. He is a big man with broad shoulders, forty years of age.

"Get in touch with the boys at once, Jim," he directs his lieutenant, "and tell them we leave for the West within the hour. Have the planes made ready." Jim Landy nods and leaves the room.

He is a man of few words. Soon Frazzini hears the mechanic tuning up the engines of the specially constructed autogiros. With rotating wings of the most advanced design, they could take off in a fifteen-yard run, land at twelve miles an hour, and carry twelve passengers apiece in their comfortable cabins. For a moment Frazzini hesitates and then rings a bell. To the man answering, he speaks tersely.

"Tell my wife I wish to see her."

**S**HE came at length, a queenly creature in a trailing robe, with sleek, dark hair and a colorless face.

"Well?" she questioned tonelessly.

"Nothing," he said, "only I thought you'd better know—" He broke off abruptly. "Why in the devil are you going on like this?"

"Am I going on?"

"You know what I mean."

Her eyes flashed.

He said stormily: "It's me who ought to be sore. Who picked you out of a dance hall, made you what you are?"

"As if I should be grateful for that! What am I, anyway?"

"You are my wife."

"Oh, yes, your wife. How wonderful! The vice-king's wife."

"You didn't talk like that when I asked you to marry me."

"Would to God I had!"

He paced the room for a moment.

"Gloria," he said more softly, laying a hand on her shoulder, "you used to love me a little. Isn't there some of that liking left?"

She shrugged from his hand. "Don't touch me, please. Your hands are dirty."

"Because I run booze?"

"You know what I mean. I don't care about that. It's the other vile traffic."

"I swear to you—"

"Please don't lie," she said contemptuously. "You lied to me before. I found out."

His mouth narrowed into a thin slit. "From that traitorous rat Killer Mike! But he won't

betray any more secrets."

"What have you done with him?"

"Ha, ha! So that touched you, eh? Worried about Mike?"

"You know that's a falsehood."

"Yes," he almost whispered at length, "I believe it is. If I didn't—"

With a gust of hungry emotion he swept her into his arms.

"Gloria, Gloria! Look at me, girl! You're mine, see! And you love me in spite of yourself! Yes, you do. I'm bad and vile, but you love me! I've got to go on—don't you see that? I can't stop—and Killer Mike is in my way. It wasn't only because he spoke to you—I could forgive that—but he actually plotted!" He freed her and stepped back. "Plotted to split the gang and rule in my shoes." He raised a fateful hand. "Do you think he can do that and get away with it? No, I must make an example of him for the benefit of others. Killer Mike is doomed." He stopped abruptly. "What is that?"

The whirr of the television-radio sounder filled the room. He stepped forward and threw the switch, standing so that the blue light irradiated his features, scanning the burnished screen set against the wall.

"Hello, Frazzini speaking. Is that you, Asbury?"

A thin eerie laugh swept out of the device.

"No," said a metallic voice. It seemed to come from an immense distance. "This isn't Asbury. This is—"

Frazzini's wife gave an audible gasp. In the burnished depths of the screen grew a face, a cold, dark face with frosty gleaming eyes.

"Killer Mike!" exclaimed Frazzini.

"Yes," said the metallic voice, "Killer Mike." Again the eerie laugh swept the room. "You'll never see Asbury alive again. I was obliged to remove him. Do you understand, Frazzini? Place him on the spot—as I intend to place you! No," went on the metallic voice, "I'm not crazy, not all hopped up as you think. Not with coke. I can read your mind, Frazzini. You are thinking you'll wire the police to hold me until you come. How clever you are! But not as clever as me, Frazzini. Not as clever as the Man-plus."

## CHAPTER IV

### *Into the Desert*

**T**HE sensational automobile murders, the slaying of the famous Doctor Jukes and his assistant, were headline news. Within an hour of their discovery, a half dozen extras were being sold. "Mystery Murders on The St. Mary's Road," screamed one black streamer. Others shrieked "Fiendish Murders Shrouded in Mystery; Police Baffled."

The two witnesses of the automobile murders were quoted.

"The taxi suddenly stopped, just like that," said the driver of the second-hand Buick. "I had to jam on the brakes hard to keep from running into it."

"Yes," corroborated the other, "I was looking out my greenhouse windows and saw the whole



thing. A man was clinging to the side of the taxi, though I don't know where he came from."

Both witnesses described the man as being of medium height, clad in white trousers and a soft white shirt. Neither saw the actual killings. One was too far away, and the other's view was interrupted by the rear of the taxi.

Doctor Jukes' servant testified that a young man answering such a description had been a patient of the Doctor. But the greatest sensation transpired when one of the bodies in the taxi was identified as that of Vincent Asbury. The identification was made by Robbins, the valet, and by his private secretary.

"Yes," said the secretary, "Mr. Asbury had been in Tucson incognito on government business." No, he didn't know what that business was, but it had to do with the department he headed and a chemical discovery of Doctor Jukes.

"Secretary of War Murdered For War Secret," captioned one paper. Excitement was running high when the chief of police received the following telegram from Chicago authorities:

CONFIDENTIAL INFORMATION THAT ASBURY, WAR SECRETARY, KILLED OR INJURED, ARREST AT ONCE MICHAEL FLIANI, ALIAS 'KILLER MIKE,' NOTORIOUS GUNMAN AND GANGSTER. DESCRIPTION: HEIGHT, FIVE FEET, SEVEN AND ONE-HALF INCHES; WEIGHT, ONE-HUNDRED FIFTY POUNDS; COMPLEXION DARK, WITH BLACK HAIR AND GREY EYES, LOOKS LIKE AN ITALIAN. OFFICERS ARRIVING BY AIR. ANSWER.

"Well what do you think of that?" muttered the chief of police. But he was canny enough to keep the telegram from the reporters; and in the early hours of the morning a big autogiro fell silently out of the heavens and settled on the flat roof of the Green Hotel.

From it stepped Frazzini and went at once to the suite Asbury had reserved, surrounded by a bodyguard of slim hard-faced men with hands on ready weapons. With him was a prominent member of a Chicago strike-breaking agency, really a henchman of Frazzini. The Big Shot sent word to the agency head that he wanted to see him. It was actually a summons from the gang chieftain. The head of the strike-breakers stared with reverent awe at the king of racketeers. Frazzini did the talking.

"This Killer Mike used to be a member of my organization, see? But he raised a ruckus and I threw him out. Why he wanted to kill Asbury is a mystery to me." Of course the visitor had his own opinion about that. He knew of the rumors connecting the war secretary with the man who spoke. "Now I want my men to co-operate with yours in hunting him down and through you I wish to offer a five thousand dollar reward for his capture. Understand?"

The visitor nodded. He understood.

"There's another planful of my men coming. Will be here in an hour or so. This killer Mike must be captured. He—"

The low whisper of a laugh filled the room. "What's that?" cried Frazzini. The gunmen were on their feet, weapons in hand.

"Ha, ha, ha!"

Frazzini whirled. Behind him, almost against the wall, stood the figure of a man in white duck trousers and a light shirt. He hadn't been there a moment before, no one had seen him enter,

and yet he had walked through a corridor dominated by armed men, entered the open door of the room with a stride.

"Ha, ha, ha!" It was the Killer laughing. He saw the weapons of the gunmen go up—slowly—as if manipulated by men scarcely able to move. When Frazzini whirled it was as if the motion would never be finished. Lazily he sidestepped the loathing bullets. But to the astounded gunmen it appeared as if he had flickered out of existence at one point and into it again at another. The bullets buried themselves in the wall. There was a splintering of plaster, and from somewhere beyond frightened cries.

"It's no use, boys," said the Killer. "Bullets can't hit me."

The guards shrank back with scared faces. At bottom they were a superstitious lot. Knowing nothing of Doctor Jukes' accelerating solution, the phenomenon witnessed admitted of but one explanation. The Killer was dead. They were fighting the Killer's ghost!

But Frazzini understood. The marvelous discovery of Doctor Jukes was being utilized by Killer Mike. He was speeded up in sense and faculty.

"So you realize the truth," hissed the Killer. "Yes, I am speeded up. I can even hear your thoughts. Compared to me, ordinary men are as snails. I can out-move, out-think, out-fight—Ah, you would, would you!" His hand flicked out and the Chicago strike-breaker, of sterner metal than his companions, went back with a crash and lay in a still heap upon the floor. "I have waited for you, Frazzini, as I said I would, to put you on the spot. But the spot isn't here. First, I'm taking you for a ride, Frazzini."

He moved. Chairs went over with a crash. A gunman fired. There was a stifled scream, and then seized in an overmastering grip and carried forward at tremendous speed, the king of the racketeers lost consciousness.

STRANGE things were happening to the Killer.

Bearing his burden he strode through the night like a wrath. First he went north until he reached the desert, and then northwest. He was Killer Mike, the Big Shot and the empire of gangsterdom was in the hollow of his hand. And not alone the empire of gangsterdom—that of America, the world. He laughed, and his wild eerie laugh echoed through the night. White-faced men and women paused to listen.

"A coyote," said some. "No coyote ever howled like that," said others.

Official Tucson was in a ferment. Poses were being formed. But the killer strode on. Not only every sense and faculty was now accelerated, not only every atom and molecule, but under his clothes his flesh was shimmering, expanding, as the atoms and molecules whirled in ever increasing orbits. The heat was unbearable.

He tore the binding clothes from his body as he walked. Where the Oracle Road turned off from the main highway he paused. Passing motorists saw the gigantic figure of a naked giant brooding under the stars. This giant carried the limp figure of another man in his arms. Stopped by policeman, the motorists related what they had seen. But when the former, armed with machine guns and gas bombs reached the spot, the Killer had vanished.

It was four o'clock in the morning when he came to Oracle. Sleep hovered over that mountain hamlet of eighty-nine souls and no one witnessed his coming. He had covered hundreds of miles in his wandering, quartering this way and that. Once he had even stood on the peak above the "window" in the Catalinas and looked down upon Tucson far, far below. He approached Oracle from the south, over the hills and ranges, and on a rocky eminence behind the small town set his burden down.

Frazzini was not dead. He came to himself in the clear mountain dawn lying on a stubble of rock and coarse grass. His uncomprehending eyes at first took in the sky, the rugged scenery and northward purple distance. He sat up, and in the act of doing so saw the Killer. But was this Killer Mike, this naked, seven-foot giant whose silvery flesh seemed to seethe and churn? Frazzini was a brave man, he possessed undoubted physical courage, but in this situation was something so strange, so weird and uncanny, that the heart fluttered in his bosom, the blood ran cold, and for the first time in his life he really understood the meaning of the word fear.

In the ever deepening dawn a Mexican lad passed with a string of burros and stared fearfully at the two figures on the crest of the hill. "Madre Dios!" he cried.

His ragged heels beat a frightened tattoo into the sides of his mount as he urged it by at its best speed. Where the narrow trail crossed a dirt road a half mile beyond, he met a car of armed men and a woman.

"Si, senors," he said, in answer to their questions, "I saw two hombres." He crossed himself devoutly. "One naked. Surely the devil himself! And the other—" But the armed men and the woman were running up the trail down which he had come.

Madness, or perhaps it was a clarity of vision beyond that of earth, had the Killer in his grip. The acceleration of every sense and faculty was sweeping swiftly towards an incredible climax. Earth and sky were shifting, changing. The thoughts of Frazzini beat on his ears. Who was this Frazzini? Frazzini was his enemy. But what meaning could that phrase have for him when the whole world was heaving, churning. His glowing eyes chained those of the other.

"Be still," he commanded. Frazzini was silent. Even his thought was stilled. It was good to be free of the clamoring noise that was the other's terrified mind, twisting, turning.

Even as it ceased, he forgot Frazzini's existence, for Frazzini disappeared; the rugged hillside, the sweep of brown landscape going down to the river and sweeping up again, miles away, to the Mammoth Range, was also blotted out, and he gazed into a new world, another dimension!

It was an ethereal place, a place of indescribable loveliness, and far away under the rays of an emerald sun formed the spires and domes of a mystical city. Out of the crystal clarity of western sky, just after the sun has dipped below illusive hills and before night comes to mantle the desert, seemed this city fashioned, and almost as impalpable and remote—a crystal city in an opalescent world.

Was it the figment of a delirious mind, or did it actually exist an octave or two beyond the vibration of earthly matter? If it did really exist,

then only the Killer's vision achieved a note high enough to glimpse it. For his body never passed beyond the fleshly rhythm that chained his feet to this world.

Though he ran like the wind and came to the environs of that mystical city, though he saw celestial beings of a god-like stature and beauty, and wonders indescribable, though he wandered through the space they occupied, everything remained just that to him—space, and nothing more. Sometimes things were below him, sometimes above and sometimes all around. But wherever they were, he could not touch, he could not handle, he could not make himself real, and in the end they faded.

AS THE accelerating fluid in his system reached its weird climax and began to recede, it was with devastating swiftness. The giant body shrank in on itself, the eyes became burnt out coals. Searching for the vision he had lost, the mystical city always beyond the horizon, hungry and thirsty and mad, the Killer wandered through the desert, until at last he stumbled over a mound of earth and lacked the strength to rise.

They found Frazzini sitting dumbly on the hillside. But the Big Shot only stared at them uncomprehendingly.

"What's the matter, chief?" begged his henchmen. Frazzini did not answer. His wife who had come to Tucson on the second plane, sank beside him and took him in her arms. Forgotten was her bitterness. "Tony," she wept, "Tony! Don't you know me, dear?"

But no recognition or intelligence would ever look out of those blank eyes. The perverted genius that would have made the very government of the United States a department in an empire of vice was dead—and ironically enough, the man who had willed this mind, this genius to cease, and who alone could bid it again to exist, had forgotten the fact, was himself mad.

But though they found Frazzini, the Killer was never found. Rewards were offered for him, dead or alive. The desert was scoured. But all in vain. Once a group of searchers paused at an old Mexican woman's abode. This was near the New Mexican border. No, the old woman said, they tended the sheep, she and her son out there, but they had never seen any one.

But she told them nothing of the one great experience of her life—how her son had died from a snakebite the week before and in her loneliness and grief she had prayed the Virgin Mary to restore him to her. Nor how she had dreamed that this prayer was answered, and when she had gone to the grave, it was to find a man's body lying across it. The man did not look like her son, it is true, but she was old and superstitious and persuaded that a miracle had happened.

So for her the dead had risen, and the Killer became her son.

Only somewhere in his befogged brain remained the memory of a celestial city—the old woman who understood English and who listened to his mutterings, thought he talked of the heaven he had left to return to her—and as he tended the sheep he would stare longingly at the blue distance. Sometimes the old mother would have to come and lead him home.

But of other things, he remembered nothing.



"Brad Martin!" yelled the pirate. "This is where you and I finally settle accounts!"

# TROUBLE ON TRITON

By EDMOND HAMILTON

*To save the starving natives of Triton, Web Carter stages a drama that is not in the script!*

**W**EB CARTER was baffled and helpless as he faced the old Tritonian chief. He felt that the tragic situation here on Neptune's moon was of his own making. Yet what could he do to avert the disaster?

"My people are hungry," old Kur-saa was saying again, in his own guttural language. "Will food not come soon?"

Even now the old Tritonian wasn't menacing. His gaunt green face and white-rimmed eyes were pleading. With his cloak of woven

fiber wrapped tightly around him, he was a thin, pathetic figure.

Neither were the other tribespeople threatening, as they stood here in their mud-hut village beneath the huge silver disk of Neptune. They looked at Carter like children gazing hopefully at an adult.

Carter was Earth, to them. They knew nothing about the Solar Development Bureau that had sent the four Earthmen out here to establish an iridium mine. They knew only that Carter-saa gave them orders in their

working of the mine, and that he it was who summoned from the sky the ships that brought food.

And now, for some weeks, they had been puzzled. Carter-saa had told them to quit digging the Iridium ore. They had obeyed. But the food-rations they received for pay had been stopped too, and they could not understand that.

"You said that if we worked in the mine, Earth would feed us," Kur-saa repeated for the tenth time. "We worked. But the food?"

"There is no food yet." Carter shook his head patiently. "Soon, maybe."

Kur-saa couldn't understand.

"Why do you not call the ships that bring food from the sky?" he demanded.

Carter felt sick at heart. How could he make these primitives understand that he was no god who could call food from the sky, that he was merely an engineer-manager of SBD who had to take his orders from remote Earth whether he liked them or not?

The fact that plentiful iridium had been discovered recently on Ganymede and that SBD had promptly ordered shutting down of the mine here on Triton, wouldn't mean anything to these people. Neither would they be able to understand that his insistent requests for rations had been met by a bureaucratic reply that no rations could be issued now he had dismissed his native workers.

**D**ISMISS his workers! That would have been easy enough if it were summer. The Tritonians would have gone back to their primitive gardens of nourishing fungus-pods, would have grown and dried the fungi and prepared their winter store of food as they had done for generations before the first Earth ship came.

But they had been working all summer in the mine, they had relied on Earth rations and hadn't raised the fungus crop. And now, in the middle of the chill Triton winter, the ships of food had ceased coming from the sky, and starvation was creeping apace upon them.

Carter saw no resentment in their puzzled faces but he would not have blamed them if he had. What could he tell them?

"Again, I will call for ships from the sky," he told Kur-saa. "They must come soon. Can't your people hold out for a while?"

Kur-saa shook his head. "The children grow weak, from hunger. There is but one recourse left us. That is to hunt Crawlers."

Carter was dismayed and stared at Kur-saa in horror.

"Hunt Crawlers? Kur-saa, you know that's suicide. If you go into those marshes and try that—"

"There is no other way." The old man shrugged hopelessly. "Some of our young

men are scouting the marshes now. If they find—"

A shrill, agonized cry interrupted the old man's words. The Tritonians had turned, were running toward a little group stumbling into the village.

Carter's heart sank at what he saw. Advancing under the light of silvery Neptune, from the direction of the great reed-marsh eastward, came a small group of young tribesmen carrying two limp burdens.

They put them down. A chorus of heart-broken wails came from the women. Carter stepped forward and took a look and then turned away, a little sick.

He'd seen men before who had been caught by Crawlers and pulped. But it was still a stomach-turning sight. The two corpses were just skeletons with skin around them. When a Crawler caught a man and pulped him, every bit of blood and tissue was sucked out of him.

The spear-armed young hunters began heavily to tell their stories. They had located Crawlers in the marsh, all right. But the Crawlers had sensed them and before they could retreat had caught two of them.

They stopped suddenly, as they saw Carter. They stared at him sullenly. The faces of the other Tritonians mirrored that look now. Carter knew what they were thinking—that these two and other tribesmen must die because he'd broken his word about the food.

Carter tried to break down their sudden silence.

"There'll be food-ships soon," he said. "Whatever you do, don't try a Crawler-hunt. Wait, and—"

His voice trailed away as he recognized the futility of it. They had no faith in his promises any longer.

He turned and stumped wearily out of the village. Not until he was clear of it did he hear the wailing break forth again.

It made Carter heart-sick. Things here couldn't be worse. If the Tritonians were driven by their desperate hunger to hunt the dreaded Crawlers, there would be many more dead in the tribe soon.

Neptune was sinking toward the horizon, the little Sun rising in the opposite sky. But day and night were little different here. It was always a chill, twilight world.

He climbed the long slope by the path through glades of dry brown fungus-stalks, and saw the distant glimmer of the mine-station's lights. Carter thought bitterly of how once he'd been wildly eager to get out here among the far planets, to join in the great solar conquest.

That had only been five years ago. Five years! And in that time, an eager youngster of twenty two had been converted into a tired, worn, young-old man who had had

more than enough to disillusion him.

Curse the bureaucrats back in the snug Earth offices! They had to listen to him, now! It couldn't go on longer like this—he and his three comrades had already given most of their own rations to the Tritonians and there was no resource left. He'd call them, make them hear him this time.

But when Carter entered the metalloy station that huddled on the slope beneath the shaft-house of the deserted mine, he found that he couldn't make his call at once. Rice and Bolling and Connor were all three listening to a "Livie" program. He couldn't interrupt the only relaxation they ever got.

Rice looked up eagerly, a youngster who was serving his first hitch in the planet-service and still getting a kick out of it.

"Get in on this, Carter—it's a great show," he invited.

Boiling, in his lazy, sardonic way, added ironic comment.

"It sure is—a hair-raising drama of life on Umbriel."

They had the Livie receiver going and each of them wore the flat headpieces of the individual receptors.

Carter smiled bitterly as he sat down. A thrilling Livie drama about adventure in the planets—that was all he needed right now.

But he reached for the fourth headpiece and slipped it over his head, the flat induction coils pressing against his skull. He closed his eyes.

**I**NSTANTLY Carter was in another man's body, in another place, on another world. He was standing in the lush red jungles of Umbriel, moon of Uranus. He gripped an atom-rifle in his hand as he moved stealthily through the giant red fronds.

Carter could see every detail of the crimson fronds and pale flowers around him. He could smell the heavy scent of the blossoms and the rank breath of rot, could hear the rustling of the breeze, could feel the soft mould under his boots and the smooth grip of the rifle in his hand.

"Brad! Brad!" he heard a girl's voice crying to him from somewhere close ahead. "Look out!"

Three men, villainous-looking scum of Venus and Mars, jumped suddenly out of the red jungle toward him.

Carter felt the kick of the atom-gun in his hands as he leveled and fired it. The crashing burst scythed down two men but the other was on his back, clinging, trying to throttle him—

He knew it was all taking place a billion miles away, back on Umbriel itself. But the man there who was really performing these actions, seeing and hearing and feeling these things, was transmitting his sensations

to millions of listeners throughout the whole System.

That was the magic of Livie broadcasting. Sight and sound sensations had long been broadcast, by the old television and radio methods. But it had taken much longer to attain similar broadcasting of the other three senses, of touch and smell and taste.

It was cleverly done. The actor selected as protagonist wore a helmet that recorded and broadcast the electro-cerebral currents of his brain. Amplified and relayed, they could be broadcast over the whole System. Whoever put on the induction-headpiece of the Livie receiver then received in his own brain every current, every sensation of the protagonist.

No wonder Livie dramas were unequalled in popularity! And especially planet-dramas such as Gordon Holl's famed company put on, which brought the color of far worlds to the stay-at-homes of Earth.

Carter knew he was here in the lonely mine-station on Triton but the Livie magic was so strong that with eyes closed he was there on Umbriel, cleverly crushing his third antagonist, then rushing on ahead.

He burst into a jungle clearing. The girl who had screamed ran forward, breaking away from a hawk-faced pirate's grip. Donna Dean, darkly lovely as always, cried another warning.

"Brad Martin!" yelled the pirate. "This is where you and I finally settle accounts!"

Two atom-guns rocked and thundered with flame as Carter felt himself hurl the girl out of the way and fire in the same movement.

The pirate choked, lay dead. The girl came and clung to him, her lithe form quivering, her lovely face against his cheek.

"Brad, it's all over," she said softly. "Now you can go back to Earth. Now we can go back."

Carter saw her eyes misty pools of loveliness as her lips met his in a long, crushing kiss. There was a soft strain of music as the whole scene faded.

He took the headpiece off in disgust.

"The same cheap claptrap as always," he muttered.

Doyle, the redheaded mine-boss, rolled his eyes.

"Boy, what a kiss!" he exclaimed. "I can feel that yet."

"Listen, they're saying something about Triton!" young Rice exclaimed eagerly.

Carter held the headpiece back in place. In the jungle glade of Umbriel the company of Gordon Holl's actors were lined up, smiling into his face, while Gordon Holl spoke to him and to the System-wide audience.

"—hope you all enjoyed our drama of life on Umbriel," Holl was saying, "and that you will equally enjoy the next in our series

of planet-dramas. Its title, as I said, will be 'Trouble on Triton,' and it will be staged on that mysterious, romantic moon of Neptune. I can promise you as thrilling an adventure as you have ever had."

"They're coming *here!*" Rice enthused. "Donna Dean, Jak Shaw—all of them!"

"Mysterious, romantic Triton!" scoffed Bolling. "Oh, my eye!"

"They can't come here." Carter was dismayed. "They mustn't."

Bolling laughed. "After all, what difference does it make if they put on their usual cheap fakes here. People back on Earth won't know the difference."

"It isn't that," snapped Carter. "It's the Tritonians. If Holl's ship comes here, you know what the tribe will think. They'll think a ship from the sky has finally brought food."

**B**OLLING'S face became sober and even Doyle looked worried.

"That's not so good," muttered the Irishman. "The Tritonians will be desperate with disappointment then. Things are bad enough now."

"They're worse than you know," Carter said somberly. "Kur-saa's people are so starved they're talking of going in to hunt Crawlers. Two of them were killed by the beasts, scouting the marsh today. Both pulped!"

"Nasty way to die," Bolling looked sick. "And a lot more of them will go that way if they're crazy enough to stage a big hunt."

"I'm going to call Earth," Carter said grimly. "They'll have to listen to me, this time. And they have to keep that Livie outfit away from here."

It took minutes for his ultra-beam call to get through on the televisior. It was Rewer, SDB's superintendent of the Neptune Division, who appeared in the glass screen.

Carter's face hardened at sight of the sleek Rewer, sitting in his modernistic office back on Earth. He'd been hoping for someone else. "Carter, I was just going to call you," Rewer drawled. "Orders have come through from Planning Council." Rewer referred to a paper. "First order is for you to give all assistance and cooperation to Gordon Holl Living Films Company, arriving Triton the twenty-first."

"I wanted to talk to you about that too!" Carter protested. "They mustn't come here."

Rewer's eyebrows arched. "This is an order, Carter," he rebuked. "Second order concerns SDB ship arriving Triton the thirtieth."

Carter's heart jumped with hope. The food-ship! They were finally sending it, his pleas had finally been heard.

"Ship is being sent to evacuate personnel of Triton station," Rewer was continuing.

"You will inventory all equipment and deliver to transport officer, and you and your assistants will return with ship to Earth."

For a moment, Carter could not believe his ears. He stared at the man in the screen.

"You're evacuating Triton—abandoning the mine?" he cried.

"Orders, old boy." Rewer smiled. "Sorry to do it, but Ganymede is producing more iridium than we need, and it's much nearer. You and your men will be given good posts elsewhere, of course."

"That's not what I'm thinking about!" blazed Carter. "What becomes of the Tritonians when we leave here?"

Rewer looked puzzled. "The natives? There's nothing to be done about them. They received their pay for their work, didn't they?"

Carter choked down the wrath boiling up in him. He tried to speak slowly and calmly, to make the situation crystal clear.

"It's not a question of what they received. The point is that they made no provision for winter because they relied on us. If we abandon them to starve, they'll be driven to suicidal extremities."

Rewer looked annoyed. "I really don't see that it's our problem. After all, the Tritonians lived very well before Earthmen came."

He didn't understand, Carter saw. Nobody on Earth could comprehend the meaning of a Tritonian winter.

"But I'll enter a memorandum of your point for consideration by Planning Council," Rewer said. "That's all I can do."

"By the time Planning gets around it, it'll be too late!" Carter said. "You've got to send food."

"Carter, be reasonable," replied Rewer coolly. "I can't allocate supplies. I think you're making too much of this matter."

He switched off and Carter was left staring into a blank screen. He turned heavily. The others had all heard.

"Of all the rotten tricks that even Planning has pulled, this is tops!" swore Doyle. "Evacuating and leaving those poor devils to starve without a winter-store of food."

"It's not done deliberately," Carter said heavily. "It's just that nobody back there knows enough about Triton to realize that the Tritonians are doomed because we kept them too busy to get their winter food together."

"The Crawlers will have all of them who don't starve to death, before spring," said Bolling with pity on his face. He laughed mirthlessly. "And this is 'mysterious, romantic Triton' that Holl's going to make a show of for a lot of thrill-craving people back home."

"Carter, couldn't you get through to Planning yourself?" Doyle asked earnestly.



"Surely they'd listen to reason if they knew."

"There isn't a chance," said Bolling. "The switchboard at SDB Central wouldn't let you through to Planning in a million years."

**Y**OUNG Rice hadn't been listening closely, for he was still too enthralled by the glittering prospect of the Livie troupe's visit.

"Do you suppose Donna Dean herself will be with Holl's company?" he asked anxiously.

"Maybe they won't bring her."

"Sure they'll bring her," said Bolling sourly. "And who knows—out here on mysterious, romantic Triton, beneath the silver light of Neptune, she might fall in love with a handsome young SDB man."

Carter did not hear. He was plumbing the black depths of final discouragement. Triton evacuated, the tribesmen left to perish.

Oh, it was only an error of administration. But by the time Planning got around to rectifying that error, most of the Tritonians would be dead. That is, unless—

A desperate possibility suggested itself to Carter. There was just one slender chance to avert the tragedy. He knew it would mean disgrace and dismissal for himself. But he was past thinking of that, now.

"Since Rewer gave direct orders, we'll have to cooperate with Holl's troupe when they come," he told the others.

"But what about this evacuation order—what about the tribe?" Bolling asked.

Carter shrugged. "There just doesn't seem to be anything more we can do about that."

They were surprised by his admission of defeat, he knew. Surprised, and a little disappointed in him. But he didn't dare tell even them what he had in mind. It was too harebrained.

Holl's troupe arrived two nights later. Their big, shining cruiser swept down out of the dusky evening sky and landed with a roar of jets on the rolling plain near the mine-station.

Carter was at hand to greet the Livie people, as were the other three engineers. Young Rice was slicked up and eager as a schoolboy.

"So this is Triton," grunted Gordon Holl, a stocky, massive-faced man of fifty, as he stared disparagingly around the sad landscape. "Who the deuce thought of coming to this hole to make a show, Wallace?"

Wallace, his suave assistant, suppressed a smile.

"I believe you first suggested it yourself, Mr. Holl," he said.

The producer curtly acknowledged Carter's greeting and offer of cooperation.

"Yes, yes, SDB said you'd give us all possible assistance."

The rest of the troupe were emerging. In

the chill dusk they looked somehow less glamorous than their familiar faces had made them in scores of Livie-dramas.

Donna Dean, muffled in a luxurious coat of sand-cat fur, sweetly acknowledged Rice's eager and awkward homage. Jak Shaw, stalwart unseen star of the first-person dramas, looked around with dislike. He and Levecq, the hawk-faced heavy, exchanged critical comments.

"We'll set up our transmitter beside your shack here," Gordon Holl said briskly to Carter. "Now how about these Tritonians—we'll need some of them."

"Need the Tritonians? Whatever for?" Doyle asked.

"What do you suppose?" barked Holl. "Our script calls for them. This story is about a dauntless young platinum miner who is menaced by hostile natives. With him is Donna, his fiancée who has arrived—"

"There's no platinum on Triton," Carter said quietly. "And the Tritonians have never been hostile to Earthmen."

Holl stared at him disgustedly. "Are you trying to tell me how to make Livies? They've got to be hostile. We'll pay them generously for taking part in a few scenes."

"Here they come now," Doyle nodded toward the east, at the same time flashing Carter a worried glance.

The Tritonians were indeed coming, the whole tribe. Streaming across the rolling plain beneath the silver light of Neptune, their chorus of rejoicing filled the air.

"Carter-saa, we saw the ship come!" cried old Kur-saa gladly. "There is food again?"

"No, no food," Carter said reluctantly. "It is not a food-ship."

"But it must be," Kur-saa insisted blankly. "Did you not say you would call one?"

Carter tried to explain to the stricken tribe. "It is a different ship. It did not come in answer to my call."

"What are they jawing about?" Holl demanded irritably. "Did you tell them we wanted to hire them? Say we'll give them more beads and trinkets than they ever saw before."

Carter paid no attention. The Tritonians had remained stricken and silent, staring at the group of curious Earth people and their ship.

**T**HERE was something heart-tearing about that silent stare, that uncomprehending, unspeaking accusation. The Tritonians felt no malice. They just could not understand.

"Then," said Kur-saa slowly, "there is nothing left but for us to go into the marsh tomorrow night and hunt the Crawlers."

"A lot of you will die there if you try it!" Bolling warned.

"Yes, but some will live and bring back a little food to our children," murmured the old Tritonian. He and the others turned away.

Gordon Holl grasped Carter's arm.

"Where are they going?" he demanded.

"Did you explain my offer?"

"They wouldn't accept it," Carter told him. "These people are starving. They need food, not trinkets."

Holl swore. "Of all the blasted luck that ever cursed a poor Livie producer! I swear if I ever get through with this series I'll never make another show further away from Earth than the Moon."

"We can still stick to the script," Wallace intervened encouragingly, "and use some of the troupe made up as Tritonians."

"Yes, but it won't have the same effect we'd have got from a whole tribe of the creatures attacking," swore Holl. He looked accusingly at Carter. "I'll report your failure to help us, to SDB."

He stalked back toward the ship. Most of the troupe, discouraged by the chilly twilight and bleak landscape, followed him back into the warmth and comfort of the big cruiser.

Carter went silently into the mine-station with his comrades. Young Rice was looking a little dashed.

"She didn't seem the same as in the Livies," he said disappointedly. "I mean Donna Dean. She was different, somehow."

"If you ask me, they're all a prize lot of phonies," growled Doyle. "Complaining because those poor starving green devils won't help them make a Livie show!"

Bolling looked anxiously at his superior.

"Carter, you know what will happen if Kur-saa's men go into the marsh after Crawlers," he said.

"There's no way we can stop them," Carter shrugged heavily. "Kur-saa is right—many will die, but their women and children will get a little food that way."

Bolling uttered an oath. "And tomorrow night while they're in there dying, people will be listening to Holl's cheap Livie about 'mysterious, romantic Triton'."

The irony of it was intensified the next morning when Holl's technicians began assembling a half-dozen huge plastic objects. They looked like gigantic, horned black worms with gaping jaws.

Connor, coming out of the mine-station, glimpsed the things and uttered a yell, grabbing for an atom-gun. But Bolling caught his arm.

"Hold it—they're not real Crawlers," Bolling said. "They're only fakes that Holl is getting ready for his show."

"Phony, like everything else about this outfit," Doyle said disgustedly. "I wish they'd meet up with a few of the real beasts."

The fake Crawlers, cunningly motivated by interior machinery, were hauled away to a little swampy valley a few miles north. Then the troupe was vigorously rehearsed in the coming show by Holl.

The big Livie transmitter had been set up beside the mine-station, where it would not show in any of the action but from which place its technicians could see the action. It would pick up the impulses from the Livie-helmet which Jak Shaw would wear, and would amplify and transmit those impulses to big broadcasting stations all over the System.

Jak Shaw was not wearing the cumbersome Livie helmet as he rehearsed the action. The four mining engineers stood watching the course of the drama with growing disgust.

Shaw, the "I" man of the drama, was a lonely young engineer on Triton, menaced by the threat of hostile natives. Levecq was his hardbitten partner. Shaw, at the opening, was to look out and see a spaceboat land a few miles away, and would instantly recognize its identity.

"Good heavens, it's Brenda's boat!" Shaw mouthed his lines. "The girl I love! She's followed me to Triton in spite of my orders."

"Of all the blasted nonsense," muttered Doyle. "One girl coming this far in a puny little space-boat."

"Quiet, there!" barked Holl.

Levecq had appeared for his cue.

"She's landed in that swamp that swarms with Crawlers!" he shouted. "There's no hope for her now."

"I've got to save her!" exclaimed Shaw bravely.

He seized an atom-rifle and ran out of the mine-station toward the distant valley.

"Okay, that scene's good enough," nodded Gordon Holl. "Now you run to the valley. Donna will be there, surrounded by the fake Crawlers. You'll shoot the beasts down—"

"Did you ever see a real Crawler?" Bolling asked sardonically. "An atom-gun has as much effect on them as a bean-shooter."

"—you'll shoot the beasts down," Holl persisted, glaring at the interruptor, "and just then our made-up Tritonians will rush you. You'll fight your way back through them with Donna to this mine-station, where you and Levecq will hold them off when they attack. And then—"

"Oh, mother, I can't listen to any more of this," groaned Doyle, retiring inside the building. "After this, people back home will never believe me when I tell 'em what Triton's really like."

But Carter listened closely to the rehearsed action. His harebrained scheme depended on it. He thought now he had a chance.

**E**ARLY that night, when the great shield of Neptune swung above the horizon, Holl's company was ready. The producer had chosen night because of the picturesque effect of the great planet overhead.

"What's that noise?" he demanded irritably.

A deep, pulsating rhythm had started coming from the east, a rolling reverberation like faint, far-off thunder.

"It's the Tritonians," Carter answered quietly. "They call it the Death Drumming, and it's their form of mourning."

"All that racket because one of them has died?" snorted Holl.

"No, it's for those who are going to die," Carter said. "They're going to hunt Crawlers tonight."

"Say, chief, the drumming will work into the script fine!" put in Wallace. "The hostile tribesmen—ominous drums—get it?"

Holl nodded. "It's good. Put a line in the script to get it over. All right, places everybody! Get your helmet, Jak."

Carter's moment had come. His nerves were tight as he told Holl, "The boys and I had better stay inside, to keep out of sight."

"Yes, yes," Holl nodded curtly. "Wallace, are Donna and the others ready over with the fake Crawlers? Five minutes to go!"

Jak Shaw had brought from the ship the heavy Livie-helmet that he would wear throughout the drama. It was its marvellously compact apparatus that made the unseen audience in all the System hear what he heard, see what he saw, feel what he felt.

The helmet had big goggle-like lenses for the eyes, a microphone against his lips and other sensitive microphones for "ears", and in its metal crown were the induction coils that picked up and relayed to the transmitter the electro-encephalic currents of his brain's sensory centers.

The announcer at the control-board of the big transmitter was already speaking mellifluously into a mike.

"Good evening, ladies and gentlemen of the Solar System audience. Tonight we present another of Gordon Hole's thrilling planet-dramas, starring Jak Shaw, Donna Dean and Archer Leveeq. As always with Holl productions, our drama is being staged directly on the world it represents and presents an authentic picture of a lonely, far-away moon. And now—"Trouble on Triton!"

Transcribed music, low, haunting chords, cut in then. Carter and his comrades had already entered the mine-station and Jak Shaw came in now with the Livie helmet.

Shaw started to put on the helmet. It was the moment for which Carter had been tensely waiting. His clenched fist swung and caught Shaw's chin. The actor dropped like a poled ox.

"Carter, what the devil!" cried Doyle. He and the other two men were startled by the unexpected action.

"No time to talk now," rapped Carter, picking up the helmet. "You want to help me save the Tritonians from desertion and starvation, don't you? Well, this is the only way."

"But how—" Bolling stuttered.

"I am going to be that fearless hero Jak Shaw, tonight," Carter said grimly. "They won't know the difference with the helmet on my head. And I'm going to make some changes in Holl's little melodrama. What I want you to do is tie and gag Shaw and then watch the transmitter out there. If the technicians get wise and try to cut the broadcast, don't let them."

"I don't get it but you know we're with you!" snapped Doyle.

Carter was already drawing the heavy Livie-helmet down over his head. The thing masked him almost completely.

The music outside came to an end with a single clear note. It was the signal for the action to begin, for Jak Shaw to turn on the Livie-helmet which would henceforth broadcast his sensations to the System.

Carter had watched carefully as the helmet was tested earlier that day. He snapped its switch. There was an imperceptible hum inside it somewhere. That was all. But now what he, Carter, saw and heard and felt, billions of people were seeing, hearing and feeling!

He rushed to the door as rehearsed and looked out into the brilliant planet-glow. A little space-boat was landing a few miles away.

"There's a space-boat landing!" Carter yelled, repeating Shaw's lines. "Good heavens, it's Brenda's! The girl I love! She's followed me to Triton in spite of my orders!"

Leveeq appeared around the corner of the building for his cue, romantic in engineer's clothing, his hawk-like face mimicking horror.

"She's landed in that swamp that swarms with Crawlers! There's no hope for her now!"

"I've got to save her!" parroted Carter. He grabbed an atom-rifle, and ran out into the silvery planet-light toward the north.

**S**O FAR, Carter had followed closely the rehearsed action. He had to, if the others were not to suspect his imposture.

But as soon as he topped the first ridge that concealed him from them, he turned and ran eastward, toward the Tritonian village.

He felt a terrific sense of what had once been called "mike-fright". For he knew that as he ran, billions of listening people from Mercury to Pluto were with him.

They saw the rolling, dusty plain beneath the monster planet's glow, just as he saw it. They heard the low roll of drums from ahead, and felt the springy turf beneath his feet just as he felt it.

He pounded into the Tritonian village. The green tribesmen, gathered about the hollow earthen mounds that were their drums, stopped the rhythm. Kur-saa and all his men were gathered, armed with long spears.

Frail weapons with which to hunt the most huge and ferocious beasts beyond Mars! Yet those slender, poison-tipped spears were in their way more effective against Crawlers than any atom-gun could be.

Kur-saa recognized Carter's voice and stared wonderingly at him and at the helmet he wore.

"Why do you come?" he asked. "We go now on the hunt."

"I'm going into the marsh with you, Kur-saa," Carter answered steadily.

"But you cannot—it means death!" said the Tritonian. "No Earthman knows the Crawlers' ways. Even of we who do, many will die tonight."

"Then why do you hunt them, when you know that it means death to so many of you?" Carter said.

He knew, as he spoke, that this abrupt change in theme must be bewildering billions of faraway listeners. But they would listen!

"You know why we must," Kur-saa answered sadly. "Our people have no food. The Earthmen promised us food if we worked in the mines, but now they give us none and we have none prepared for winter." He motioned toward his silent people. "See, even our young grow thin and weak."

Carter had seen before. But he walked forward, he looked slowly around the circle of thin, haggard green men and women and children. He wanted others to see this, he wanted the whole System to see it.

"Yes, this is the responsibility of us Earthmen, Kur-saa," said Carter. "We took you out of your own way of life and now we're deserting you to starve. That's why I am going to hunt with you tonight."

Kur-saa made a gesture. "Then come."

A wail went up from the women of the village as the little troop of tribesmen moved out through the dusk eastward. They tramped straight east for half an hour before reaching the edge of the great marsh.

It stretched black and evil beneath the planet-glow, a dark, reedy wilderness whispering in the wind. Here laired those amphibious monsters that had made Triton's swamps dreaded.

"We shall beat southward through the reeds in a line," Kur-saa whispered. "When a Crawler is started, all must attack it. If more than one, split up and stab from all

sides. Some spears will reach them."

Carter's heart pounded as he went forward with them through the reeds. Icy water and mud were to his knees, saw-edged reeds tore at him.

They had gone a hundred yards when an explosion of movement, a monstrous bulk rearing and a thick, throating bellowing broke from his right. He glimpsed the gigantic upraised worm-head, horns glittering in Neptune's light and its pale, flaming eyes peering.

"Rush in and stab before he charges!" yelled Kur-saa. "Thol—Arcul—quick!"

With a crash the giant worm-body hurled itself down upon them. Carter fired but the streak of atomic force only seared that huge body. Its core of life was too deep in gristle for one atom-blast to reach.

Another Crawler had loomed simultaneously on the left. The tribesmen were frantically stabbing with their long spears, tipped with the paralyzing poison that was the only possible weapon against the monsters. There was a sudden hideous human scream—

"He has Thol—quickly!" cried Kur-saa.

They were not quick enough. The mountainous body of the first Crawler, reached by the poisoned spears, had crashed prone but the other had seized the nearest tribesman in its gaping, toothless maw.

It was gone with Thol before they could fight through the muck toward it. Carter stumbled past the towering, motionless body of the slain beast—it would be cut up later for food by the Tritonians, and cured in a way to neutralize their own poison.

"Two men crushed and killed already!" said old Kur-saa hoarsely as he came up. "And the third—"

They found the third man, a few minutes later. Carter felt like retching at the sight.

Thol had already been pulped. His head held in that gaping maw, his blood and tissues had been swiftly sucked and all that remained of him was a skeleton with a skin around it.

**S**ICK as he was, Carter stared fiercely at the pitiful corpse. Let them all see, back there in their comfortable rooms on Earth! Let them see what the Tritonians were being driven to!

"Ahead—two more!" yelled a Tritonian from the left. "This way!"

Carter plunged with them through the reeds. He heard a sudden warning cry.

Not two but three Crawlers' heads lifted gigantically ahead. And then, like nightmare, a fourth monstrous worm-face loomed suddenly up from the reeds right over Kur-saa.

The old man, in whirling, dropped his spear. As he clawed in the muck for it, Carter was leaping forward and shooting.

No use! He knew it was no use even as he shot, as that gigantic head and pale, glittering eyes darted down at him. You couldn't kill a Crawler with an atom-gun fast enough to save yourself.

Reeds snapped under him as Carter felt the gigantic maw close with hideous lips on his head and neck. Fetid breath of the monster whirled his senses. He was falling, beating with puny fists—

He had a last ironic thought that *this* was the climax of all Livie-dramas, this death that billions of horrified listeners were dying with him in sensation. Well, he'd shown them what he'd hoped to.

Then there was nothing in Carter's mind but the pound of his bursting brain, a throbbing that seemed oddly like the throb of a space-ship's rockets, to his dimming mind. . . .

Carter knew he wasn't dead after all, for dead men don't wake up and feel pain all over. He got his eyes open and found Doyle and Bolling and Rice bending anxiously over him with restoratives.

Then he saw that he was back in the mine-station. He heard an anxious murmuring and saw Kur-saa and the other Tritonians in the doorway watching.

"What happened?" he asked hoarsely. It hurt his head even to speak.

"It was our fault, but anyway it saved your life," Doyle said. "We watched the transmitter here as you said, and stopped them from cutting it when the broadcast from the Livie-helmet started going haywire.

"But we forgot about their ship," he added.

"Holl was crazy mad at you for ruining his show. He couldn't cut the broadcast with us standing with our guns over the transmitter. So he started in the cruiser after you, to snatch the Livie-helmet off you and stop it that way."

"And their cruiser jet-landing in the marsh on top of those Crawlers scared the beasts away," Bolling put in. "Lucky for you, Carter! One of the brutes had his jaws on you, and you'd have been pulped in a minute."

A face intruded among the three bending over Carter. It was Gordon Holl's face, purple with rage.

"So you're still living!" the producer snarled at Carter. "I'm glad of that. For now I can send you to Lunar Prison for life for sabotaging my program."

"Was your program more important than showing the System the injustice done to the Tritonians?" Carter asked.

"To blazes with the Tritonians!" raged

Holl. "I've put on fifty planet-dramas and nothing like this ever happened before. When I get through with you—"

He was interrupted. Wallace, his assistant, pushed into the building with a sheaf of paper slips in his hand.

"Chief, look at these!" he exclaimed to Holl. "They've started coming in by the boatload—reviews of our show and messages about it. Here's one just in from that tele-column, 'The Ether Chatters.'"

Holl read the slip aloud. "Gordon Holl has outdone himself in his latest planet-drama. Tonight Holl electrified the System by abandoning his usual melodramas and staging with ghastly realism an expose of conditions on Triton. We predict that 'Trouble on Triton' will rank as a Livie classic, and will stir up a storm about that distant moon."

"There's dozens of them, and all of them raves!" Wallace exulted. "They say it's the tops in broadcasts for thrills and realism."

Gordon Holl looked from the slips down at Carter. There was a faintly sickly look on the producer's face.

"Well, Carter, what about it?" he demanded. "I'll keep my mouth shut about everything if you will."

Carter nodded. And the producer turned and walked out with his assistant. His voice floated back.

"Pile on the publicity about it, Wallace. Tell 'em I planned this for months as a surprise, that I knew about the Tritonians' pitiful condition and wanted to do something."

"A phoney to the last!" exclaimed Doyle, in disgust.

"It makes no difference," Carter said. "The main thing is that it will make Planning think twice about Triton."

It did. For within a few hours, the television rang and the worried, sweating face of Rewer looked at Carter from the screen.

"Carter, that blasted Livie-show has raised a hornets' nest back here on Earth! We've been flooded by messages protesting the treatment of the Tritonians."

"Then you'll send food-ships?" Carter asked hopefully.

"Send them? They're already ordered to start!" Rewer said. "Furthermore, the evacuation order is rescinded. You'll stay on there until your regular relief comes."

He added bitterly, "And do me one favor: If any more Livie-actors show up there, leave them off your moon."

"I don't know about that." Carter grinned weakly. "You see, I was once a Livie-actor myself."

## THE ETHER VIBRATES

(Continued from page 8)

Sarge, I definitely disagree with those fellows who want THE ETHER VIBRATES taken so seriously. I like your moronic way of answering the letters. The thing to do with those letters saying they don't like your sense of humor is to burn 'em for fuel to heat camp.

I would now like to send out an urgent appeal to staff fans wherever they may be. If you have any issues of SS from the years 1939, 1940 or 1943, will you please, please, please notify me at once by mail. The cost of mailing will be paid by me and exceedingly high prices will be paid for the books.—1470 East 13th Street, Brooklyn 30, New York.

So he likes my moronic humor, eh, Frogeyes? Well, just for that, we won't run his letter at all. What's that—it's too late? Well, just to prevent the spread of false propaganda among innocent (?) fen, run this special message off on the telesender, Wart-ears—

SATURN'S HUMOR NOT MORONIC DESPITE FALSE REPORTS. . . STOP. . . P. S. WHAT DID HAPPEN TO THE OTHER JOE KENNEDY?

## SHOCKING TREATMENT

By Sally Wolf

Dear Sarge: I've never written your publication before, in fact, I have written only one letter to any publication of the kind. But you have a story in the summer edition that fairly screamed at me for attention.

The story I'm referring to is FATAL THOUGHTS, by Leslie Northern. Maybe I'm wrong, but I don't think your author knows much about insulin in spite of the novel use he had for it in his story.

There were glaring inconsistencies to anyone who knows much about insulin. First, insulin reaches its full effect in the system approximately one hour after injection, which is the reason why it is usually injected fifteen minutes to half an hour before a meal. Warder, in the story, waited until he was close to the beast before he injected the insulin, and then—but I quote, "For an instant there was no change in the man's expression, and then the skin seemed to whiten. . ."

This could possibly be explained by the fact that the man took such an enormous dose of insulin that it took effect more quickly than a normal dose. I still don't think it would take quite that little time, because it would surely take at least a few minutes for the insulin to dispose of the normal sugar in his body and blood to the extent that it would cause insulin shock.

Then, if he did take such an enormous dose, WHO BROUGHT HIM OUT OF IT? His wife didn't, because she didn't know he had taken insulin. Warder himself certainly couldn't; I hardly think the beast did!

I am diabetic and have taken insulin for a year. I've had insulin shock and I know how it acts. I don't know much about the insulin shock treatment for insanity which the author mentions, although of course I've heard of it. I do know this—if the man took enough insulin to cause this shock, sufficient to cause the effects mentioned in this story, it would have been next to impossible for him to come out of it without outside help. I think I'd better chance the "next to" to "absolutely." By the time the effects described were reached, even if he were not yet in a coma, he would certainly have been unable to eat the necessary sugar of his own free will.

Why, oh why, didn't Mr. Northern read up a little on insulin before he wrote his story? The idea was novel and the story could have been good. All he would have had to do was to read any information on diabetes, for the facts I have mentioned are certainly well known.—2227 West Iowa Street, Evansville 12, Indiana.

Goodness, Frog-eyes—trapped by a hypodermic! Put yourself in a space conveyor, my Plutonian pet, and land on Earth and Leslie Northern and grind his nose in a medical textbook in the

nearest public library. Ye Sarge if, for once, embarrassed, but he's going to pass the proverbial buck anyway. Let Mr. Northern carry the blame for that one. Sorry, Mrs. Wolf.

## LIVE AND LET OLIVER

By Chad Oliver

Salutation, Sarge: Unfurl those banners! Roll those drums! Blast those trumpets! Rejoice, one and all, for Oliver the incomparable has returned! ('Till the gentleman who softly murmurs "So What?" kindly send me his address so I can focus my lethal Skunkodor Projector in his direction? Thank you.)

Wandering lazily down the pathway leading from the sublime to the ridiculous, we find ourselves confronted with other than our old friend STARTLING STORIES, Summer version. And io and behold, we are hit in the face with, of all things, an attractive cover! My amazement is profound, but I am humbly grateful. No bugging musclemen, no bored and doubtless cold female patiently expressing terror, no faintly amused BEM lumbering along. Just a nice quiet spacehip going through a tubular bonfire. Happy day.

I don't care for G-men and G-women in my science fiction, and I do not like John Carstairs, who seems to be sort of a weed-infested Dick Tracy. Therefore, I wasn't surprised when I failed to enjoy THE HOLLOW WORLD. A few interesting ideas mixed in with a standard plot. That's all. The illustrations were likewise unimpressive.

Repp's THE RED DIMENSION was rather pointless, I thought, while Leslie Northern's clever FATAL THOUGHTS was the best this issue had to offer. Marchion's "monster" for this latter tale, by the way, is quite amusing. It looks vaguely like and elephant in a punch bowl.

I always enjoy THE ETHER VIBRATES. To me, the letter columns of the various fantasy magazines are fully as unique as the stories. I often wonder how they happened to develop as they did. I imagine they're a good bit of trouble at times, but they're a real asset. Specifically I liked Joe Kennedy's missive and had to laugh out loud at the Circle of Ten. Not so much what they said, but the way they said it. I read like the minutes of the Ku Klux Klan. Peggy McIntyre wonders what happened to Oliver. The Sarge wonders what happened to Oliver. Almost everybody wonders what happened to Oliver, inasmuch as he hadn't noticed anything. It's all very puzzling.

AFTERMATH next issue sounds good. Let's hope so anyway. Until then, I bid you all a fond farewell and all that sort of rot.—Mrs. C. L. Coleman, Crystal City, Texas.

Getting "you all" and "all that sort of rot" into one sentence is something of a verbal mixed salad memorabillium. Snaggie, old tooth. But what can you expect from a kiwi who mentions competitors in the same breath with the Sarge. We'll blow his gaskets with one of John Carstairs' bagpipe plants.

## . . . OR ELSNER!

By Henry Elsner, Jr.

Dear Sarge: I'm writing this note to let you know that I appreciate the excellent cover on the latest STARTLING STORIES. Aside from the art and the subject matter, I think the color composition was also very well done. The colors were in contrast, but they were not glaring. I like the black background much better than the usual red skies. All in all, this is another example of what Bergey can really do if assigned the right type of subject matter.

Y'know, it's a funny thing, Sarge, but I've noticed the fans are always ready to slam your covers in the letter columns and satirize them in the fanzines. Some of them deserve it. But whenever you print a really good cover, you get little or no response at all. Well, no matter what the others say, I for one offer—"Congratulations, Sarge, and let's have more of 'em!"



Thanks for the swell plugs you've given my organization, the SASFA, in recent issues of your magazine. I'm sorry to announce that the SASFA is no more. It has officially been merged with the National Fantasy Fan Federation. To those who have worked hard with me for the club, I can only give my sincerest thanks—and to those who have tried to undermine the organization right from the beginning, I can only say that I hope they're satisfied.

However, I am still interested in helping new members get started in fandom, which was the reason for my founding the SASFA. I am on the NFFF WebCom, and it is my job to send out booklets explaining fandom to all readers of STARTLING STORIES who show interest. If any of your readers are interested in taking part in such activities, I'll be glad to accommodate them if they will drop me a line.—13618 Cedar Grove, Detroit 5, Michigan.

Well, here today, gone tomorrow, Henry—or something. Incidentally, despite Mr. Elsner's willingness to help SS neophytes, this magazine is in no sense an endorser of the SASFA, the NFFF or any other amateur group. We merely like to see the fans have fun. Wart-ears, the Xeno!

## DEMOTED!

By Betty Barford

Dear Corporal Saturn: After wading through the letter column with Snaggletooth, Wart-ears and Froggy, I came out Bug-eyed. I'm new here, you see. At first I was curious as to what a Joe Kennedy was. Everybody else seemed to know. Now I know. It seems that everyone is picking on poor Bergey. I am not sticking up for him out of contrariness, but out of a sense of outraged justice. The cover was fine. It was just what the fans should have, even if they are too dumb to realize it.

The orange sky in the Spring issue of SS was perfectly logical. Wasn't Roo a red planet? What is the most logical sky glow then? Bergey puts together an eye-catching, well balanced cover. The general colors are exciting and intriguing, as is necessary on a cover. Moreover, what holds Joan's (Censored) up is no doubt a professional artist's secret. It is really a sleek job, but I hope Bergey hasn't been browbeaten into it. What does he use anyway, an air-brush?

The inside art work is revolting, the Buck Rogers style art on page 11 particularly unappealing. Same for pages 19, 67 and 71. It seems to me that the illustrations can get over the idea without being ugly. I fully expect to be called down because of my sex—"what do you want, dainty dragons, handsome horrors and magnificent monstrosities?" No fair. All I ask, Sir Satan, is a picture that you can look at without having your eyes distracted by lines going all over and too much at once.

**FATAL THOUGHTS** by Leslie Northern was morbid, but not too bad. In future he should remember that the reader wants easy reading. Too much detailed thinking and feeling and recalling makes us work too hard.

**THE RED DIMENSION**, though not worthy of Hall of Fame reissue, was good. Didn't the artist read the story?

**THE HOLLOW WORLD** was excellent and held my interest from beginning to end. I was even skeptical of the plant that sat next to me while I was reading. I rate the last issue as follows—

**RED SUN OF DANGER**—thrilling and suspenseful.  
**ARE YOU THERE, CHARLIE?**—clever and light.  
**DEATH BY PROXY**—interesting and well done.

**THE ISLE OF UNREASON**—interesting fairy tale. I am sorry that I can't give more complimentary than most of your correspondents, but if they pick on Bergey anymore, I will really get in the groove.—140 West 233 Street, New York 53, New York.

We're not sorry, Betty, are we Froggies. A complimentary female BEM is always a pleasant surprise. Incidentally, Betty I wouldn't expect to be called down on account of your sex if I were you, I'd expect to be called up—or was that the idea? Yuk, yuk, yuk.

[Turn page]



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## BIFFS FROM BOFF

By Benson "Boff" Perry

Sarge, ol' boy: With the aid of blue pencils, shears, hatchets, aspirins etc., we gleefully turn to the latest SS. Yup, cover is okay. No kick.

But THE HOLLOW WORLD. Frankly it was goofy. It was a formula story among other things. Plants were created for any and all purposes. I followed through the Mimas molds all right and didn't balk at the Wet Blanket Fungus or the Compass Lichen or the Rope and Handcuff plants, but by the time I reached the Linked-Chain Vampire Fungus and the Ropeladder Plant, my cranium was perambulating in concentric patterns.

All botanists will not be surprised at these plants I have discovered however. It seems that a drink of Xeno causes illusions of the plant kingdom rather than midget giraffes, eagles with faucets et cetera. After imbibing several cc's of it, I saw John Carstairs himself enter the room.

He presented me with a Light Bulb Plant that comes complete with a month's supply of electric eels. The eels are AC current because they operate in cycles. If you don't like this system, inject some morphine and you have a DC eel that doesn't work at all.

Recovering our altered sanity for a moment, let us dwell upon THE ETHER VIBRATES.

Photo on p. 60.  
Note to Peggy McIntyre—Saturn's reference to Ghu was taken from the Fancypedia, which was written by Speer. Speer is a member of the Foo-Foolist group, so he might be slightly biased.

Contrary to what Saturn said, SLAN is not a fan cult, although fans as a whole often call themselves slans. SLAN is a story by van Vogt generally adjudged to be the greatest piece of sf written.

Let's hear more humor from the hilarious Circle de dek.

So you didn't like my poem in CY, eh? I'll let you in on a secret. I liked the rhyming scheme so much that I used the same thing all the way through. But there's one point on which I don't have to bluff my way, and that is the fact that many sonnets are divided in two stanzas. In fact all sonnets are supposed to have the subject divided into two parts—eight lines for the first and six for the second, though they don't necessarily have a space between.—68 Madbury Road, Durham, New Hampshire

No comment, Snaggie, on should-be-bottled Boffo's remarks anent possible uses of plant life on other planets. And he too is inhaling Terrean Xeno. The Department of Internal Revenue should get hep to this new menace.

As to the sonnet—pardon, alleged sonnet—in CYGNI No. 2, ye Sarge has lost his copy so can make no further check. However, the Durham Dyktawo achieved something not only unique, but singularly dire. Ye Sarge knows that the classic Italian sonnet is made up of a two-quatrains octave followed by a sestet and that the more corrupt English forms run often to three quatrains and a couplet clincher, but the unpericlear Perry's seven couplets or whatever they were were out of this galaxy or any other. They should be kept out . . . permanently!

Warty, more Xeno. The real Xeno with the transverse kick.

## BUNK FROM DUNK

By Walter Dunkelberger

Dear Sarge: The whole current issue of STARTLING STORIES is very nice. I enjoyed HOLLOW WORLD (but then, I usually like Long's work). FATAL THOUGHTS was very nice also—I'd read the Hall of Fame Classic before, but a repeat refreshed pleasant memories. I hope that you'll repeat some of the long novels printed years ago when paper restrictions are lifted. For myself, I have complete files of all your issues, but I'm sure that others not so fortunate would enjoy many of the tales.

If you've got some friends who are looking for back issues of any of your publications, have them drop

me a line—in that Minn-Dak sale we have a few STARBILLINGS, a few CAPTAIN FUTURES, some THRILLING WONDER STORIES and a lot of WONDER and SCIENCE WONDER, predecessors to TWS and SS. The list should be out shortly.—1443 Fourth Avenue South, Fargo, North Dakota.

Okay, Dunk, but since when has ye Sarge had any friends?

## HALF PINTY SPEAKS

By Frank "Pinty" Clark

Dear Sarge: Boy, you fellows tried to pull a sly one, didn't you? Thought you'd slip one over on us. Well, you didn't. Except for the red and yellow paint splashes, the spaceship cover was great! No BEM, no overdressed girls and no heroes. It was novacious! Keep it up!

Somebody suggested that you get Brett Sterling and Leigh Brackett to write a story together. Don't do it! Leigh's stories are great as they are, and the only trouble is that you don't have enough of them.

Speaking of Leigh Brackett reminds me—remember the picture of Leigh in the Fall '44 SS? Well, to me, Leigh and Clare Booth Luce look amazingly alike. Not only does Leigh give me the same impression as Clare Booth Luce, but I admire them both very much.

Have any of you seen the pictures by Finlay in a recent Sunday supplement? There have been three of them in the last four weeks. How come they get them and you don't?

Peggy McIntyre sounds nice. I wonder if she and Joan McKinney have time to correspond with anybody.

In MEET THE AUTHOR, Frank Belknap Long (that's my name too—Frank. I hate it, but like my nickname, "Pinty," better. It's pronounced like a safety pin and a cup of tea) forgot to mention that The Black Druid was included in SLEEP NO MORE.

Listen, people, write in and tell the editors how great the spaceship cover is. It's a well known fact that when people are contented they don't write much, so I figure they're giving us this one spaceship cover to make us shut up. Then they can say it failed to draw as much comment as other covers and go back to the standard BEM, babe and hero type.—4 Arlington Avenue, Baldwin, New York.

Ye Gods, it has finally happened. Clark has bracketted Globaloney. Well, he personally has nothing to Luce. As for Finlay, we got a swell drawing from him just a few days ago which will appear in a coming issue. He is serving Uncle Sam on Hawaii. Meanwhile, watch for the work of L. Verne Stevens. He is terrific.

Which winds up letters received on the last issue. But we still have a flock of leftovers from two issues back, which we will run in capsule form. If you want to be quoted verbatim by ye Sarge, get your mail off as soon as the issue is read. Otherwise it may reach us too late, as THE ETHER VIBRATES brooks no delay.

## NICE MAN, FLEISCHMAN

By Owen Fleischman

Dear Sarge: It was quite a shock to me, seeing our old pal Future in the wrong mag, but the story was okay. The new print is fine too, and it seems that there's more reading matter to the mag now. . . . For a closing thought, tell me, Sarge, why do they make all the big stupid drunken lugs sergeant? Huh? —1663 University Avenue, Bronx 53, New York.

Because somebody has to handle you teetotalers!

## CALDWELL DROPS IN

By George Caldwell Jr.

Dear Sarge: This is my first letter to SS or any [Turn page]



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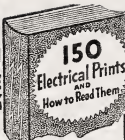
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other stf mag. You should feel honored, but I just had to break a long silence and drop in. (Plop) That's me dropping in. I liked RED SUN OF DANGER. Captain Future is good if not read too often. Having read all the stories leading to the Denebian story, it makes a swell series with this the best of the lot. . . . Since everyone is listing bests, here's mine—STONE FROM THE MOON, by Otto Willi Gail. It's from your SCIENCE WONDER QUARTERLY for Spring, 1930, and if you could publish it serially, WOW!—1115 San Anselmo Avenue, San Anselmo, California.

Unfortunately, George, quarterlies and serials don't mix.

## VOICE FROM ABROAD

By A. A. Taylor

Dear Sarge: I am writing to find out whether it is possible to obtain the magazine STARTLING STORIES by direct subscription from New York for twelve issues. If it is possible, please let me know how the money is to be sent and how much extra for postage. Taken all around, I think SS is about the top stf mag I have read—22 Darlington Gardens, Shirley, Southampton, England.

Yes. An International Money Order for \$2.40 together with a request for twelve issues will get you STARTLING STORIES for three years and take care of postage fees.

## SLOW PACE

By Tom Pace

Dear Sarge: I got the Winter ish some two months late, so I came in late on this ish. The best title is—was—no, is, Noel Loomis' IRON MEN. An excellent story. The two-spot is F.B. Long's DARK COMMAND. SKYROVER is next. RED SUN OF DANGER was okay, if no classic . . . if by 2,000 A.D. humanity hasn't accomplished more than it did in all the centuries before, I shall eat a 37-year-old collection of stf.—Eastaboga, Alabama.

Kiwi Pace, you are not only slow, you must be hungry.

## SCALDED BY A SCALLION

By Richard E. Wimer

Dear Sarge: I am writing in regard to the Spring issue of STARTLING STORIES featuring Captain Future in RED SUN OF DANGER. I did not enjoy this story. It was more like a detective yarn than science fiction. I hope you will have a much better story in the next issue.—450 North Twelfth Street, San Jose, California.

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## DOWN WITH WHIMSY

By C. R. McClellan

Dear Sarge: When you put my letter in your Spring Issue TEV you started something. So far I've heard from Perry, Sykora and the NFFF. I've also had an enticing offer from a pill roller, a piece of literature from a girdle manufacturer and a plug from a seller of correspondence courses. I've read stf a long time but never read TEV much because of a Joe Kennedy letter. What's he want—to be entertaining and have a mission in life too? . . . I liked most of the Spring Issue, but so help me, if we ever get another of those Heavens-to-Betsy-Chop-Suey-for-the-Lamps-of-China things like the one in the Winter Issue Hall of Fame, us whimsy lovers will see that you take the Cure and Pledge!—8253 Longpoint Road, Baltimore 22, Maryland.

Hereafter, when throwing chow mein at Monsieur McClellan, we will run like the very dickens on wings of Xeno!

## BLESS HESSE

By Bob Hesse

Dear Sarge: I'd like to join the Futuremen. I don't know how many girls have joined, but I've been

[Turn page]

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### WHY, OH WHY!

By Thomas Hadley

Dear Sarge: Holy cow—does this go on all the time? The ranting in ETHERGRAMS was the best story in your last issue. This is my first attempt and I haven't quite got the hang of it yet, but when I do, I'll be a bigger pest than the rest of the troupe put together. Better take a big swig from that jug, Sarge. I liked the letter by C. R. McClellan, but why, oh why, did I ever start to read this stuff anyway?—271 Doyle Avenue, Providence, Rhode Island.

I don't know, Tommy, old astrogator, why did you?

Very well, Froggy, wrap up the tickler tape and throw the messages into the asteroid belt. Ye Sarge is finished with them. On the whole, a meager contribution, unworthy of more comment than this old space dog has seen fit to accord them.

So close up the jets, Snaggie, old tooth, and take over the controls. Wart-ears has charge of the Xeno delivery this trip around. Strap yourselves in tightly, pee-lots. We're about to accelerate! Awwwwaaaaay!

—SERGEANT SATURN.

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# REVIEW OF THE SCIENCE FICTION FAN PUBLICATIONS

By  
**SERGEANT SATURN**

**T**HERE are some sadly notable omissions in the fanzine review list this time around—notably Laney's ACO-LYTE and Tucker's IE ZOMBIE—and a dismal forward by Burbee in SHANGRI L'AF-FAIRES seems to threaten the imminent ex-



inction of that sprightly record of the zany doings at 637½ South Bixel Street, Los Angeles 14. What gives?

However, fanzines must and will go on, and two new entries into the ever-shifting field of amateur sf publication are promised in properly menacing tones. One, to be called THE SCIENTIFICTIONIST, is in the process of production by its hopeful editor, Henry Elsnor Jr., who will welcome any sort of fan contributions up to 350 words if addressed to his home at 13,618 Cedar Grove, Detroit 5, Michigan. The other, a fanewcard, is being put out by Darrel Burkhardt of Long Lake, Minnesota, who thirsts for fanformation. Give the boys a hand.

With this matter disposed of, ye Sarge will now have Snaggletooth set out the de-atomizing mallet and the corrosive acid and employ them in a review of those magazines that have come in since our last trip out. Once again, we are employing A and B categories to separate sheep from goats. So. . .

CHANTICLEER, 25 Poplar, Battle Creek, Michigan. Editor, Walt Liebscher, 15c per copy.

A fair issue, buoyed by the usual intelligent reviews of stans, this time contributed by Chauvenet, Speer, Spencer, Watson, Trigrux and others. The rest of the issue is larded with the usual wagon loads of individual opinion and odious comparisons of favorite writers et cetera, is further undistinguished by a sad sack item of le jazz hot peened by Linney, who apparently would have difficulty differentiating

[Turn page]

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between choruses by Ernie Caceres and Fud Livingston. FANEWS SECOND MILESTONE ISSUE, 1443 Fourth Avenue South, Fargo, North Dakota. Editors, Dunkelberger & Kay.

The Fargo expressmen have come up with a pleasant testimonial issue of their invaluable FANEWSCARD which rates an A listing. It contains an open letter from Ray Palmer praising Ray Palmer, a piece by Tucker and plenty of faneews. Altogether, an excellent job.

FANTASY COMMENTATOR, 19 East 235th Street, New York 66, New York. A. Langley Searles, editor. Printed quarterly, 20¢ per copy, 6 issues \$1.00.

This fairly new arrival in the field maintains its studied aura of pseudo-scholarly dullness throughout, avoids cover controversy by doing away with same entirely. Issue No. 6 has poetry by Dante Gabriel (not Christina this time) Rossetti and is featured by an interminable analysis of the late H. P. Lovecraft whose aif contribution is called "supreme." Shades of Snuffy Smith!

SHANGRI L'AFFAIRES (issues number 22 and 24—where is number 23?), LASFS Clubroom, 637½ South Bixel Street, Los Angeles 14, California. Editor, Charles Burbee.

No new feuds enliven these journals of Los Angeles fan doling, but the issues are overshadowed by Editor Burbee's threat of retirement (say it ain't so, Joe!). Outside of a tedious glossary of spouses and offspring of prominent LASFS members, continue gay and make pleasant reading, even as far east as New York. Don't drop the torch, kids, you're doing good work.

STELLARIAN, Box 131, Hoquiam, Washington. Editor, T. Daniel. 10¢ per copy.

This newcomer has the benefit of a startling cover in which a bright red devil has apparently amputated a prominent part of his anatomy, spitted it on the point of his tail and is roasting it over an open fire in lieu of a frankfurter. Once by that, the reader finds himself on more familiar ground served up by Andy Anderson, Les Croutch, Chad Oliver, Larry Shaw and others. Okay.

SUN SPOTS, 9 Bogert Place, Westwood, New Jersey, Editor, Gerry de la Ree. Free to contributors.

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I'm taking de la Ree's word for it that he had a Warth cover and that the printer did foul the works, hence the A listing. Remarkable for Jokenedy's plea for more permanent attention to sf short classics and the 1945 Beowulf Poll Results. Merritt, Finlay, the Acolyte and Tucker won top honors in their respective fields. Back cover pictures—pweh!

**THE TIMEBINDER** (issues number 1 and 2), 25 Poplar Street, Battle Creek, Michigan. Editor, E. E. Evans. Published irregularly. Price, what you wish to pay.

This extremely neat looking fanzine is definitely dedicated to our more serious thinkers, to say nothing of our little uplift movements. The second issue's somber discussion of conscientious objectors, and the nature of man is relieved by a flock of testimonials for the first issue. I dunno.

**THE ALDEN PRESS**, Box 6475 Metro Station, Los Angeles, California. Editor, Forrest J. Ackerman. Published irregularly. Price not set.

This neatly illustrated pamphlet is a dignified tribute by AE and others of the inner IA circle to Alden Ackerman, who was killed in action in France during the battle of the Bulge.

**TOWARD TOMORROW**, 628 South Bixel Street, Los Angeles 14, California. Editor, James Kepner. Published irregularly. No price listed.

Behind a honey of a prancing steel cover by Bill Watson, this magazine is devoted chiefly to pleading the cause of race equality, especially in behalf of the American Negro. For such an issue, ye Sarge is glad to shed his usual frown for pretentious efforts toward human improvement. Worthwhile.

**VAMPIRE**, 84 Baker Avenue, Dover, New Jersey. Editor, Joe Kennedy. 10c per copy, 3 issues 25c.

Kennedy has blossomed forth, behind a dingy black cover, with a fanzine all his own. It is larded with somewhat lumbering tries for shivers, even more lumbering Kennedania and an appalling S. Mason parody on "Jabberwocky." All in all, good clean fun.

**VOM**, Box 6475 Metro Station, Los Angeles 55, California. Editor, Forrest J. Ackerman. 15c per copy, 7 issues \$1.00.

Issue No. 39 had an excellent photographic cover of the late Pfc. Alden Loraine Ackerman and a dignified obituary by his brother, the editor. The same issue was remarkable for a fanfesto by James Kepner assailing virtually all fans but James Kepner. Otherwise, it and issues No. 38 and No. 40 were as usual packed interesting fanletters culled from all over the world.

So much for the A list—a solid if not imposing array. All at once, the editors seem to have become conscience stricken and suddenly determined to do good. Let them beware. That way, dullness lies—and dullness, in any publication is the original, unforgivable sin!

Now let's take a look at the B's: **COUNT WACULA**, 1607 North Philp Street, Philadelphia 22, Pennsylvania. Editor, S. Mason. 10c per issue, 4 for 35c.

This second issue off the Gilded Gremlin Press continues to hold first place in the zany sweepstakes. The contents, mostly apparently by Editor Mason, are as hard to refine as they are to comprehend. **CYGN1**, 68 Madbury Road, Durham, New Hampshire. Editor, Benson Perry. Printed bi-monthly. 10c per issue, 7 issues 50c. [Turn page]



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**THIS** issue, it is John Russell Fearn, author of our stirring complete novel, **AFTERMATH**, who writes in to tell us how he came to conceive the story. A topnotch veteran science fiction writer, Fearn seems to have come through blitz and buzzbombs alike without scathe—for which all true sfans are properly grateful.

We give you Mr. Fearn as follows:

I suppose it is always the hardest part of a writer's job to have to say something about himself, instead of the characters he has created. Anyway, I'll have a



John Russell Fearn

shot at it and try to summarize what line of thought led up to the plot of *Aftermath*.

For myself I have reached the ripe old age of thirty-five and as many readers know—and have at times violently observed—I have been plugging science fiction for the past twelve years, covering the field of practically every magazine dealing with this type of fiction. Today my activities are somewhat cramped by the grim necessities of war, but I still manage to put something out in the hope that it will entertain. My ambition for many years has been to land a long story in **STARTLING**, but somehow I never seemed to get around to it. Yet now, with time limited and a war in full swing, I accomplish it. Which only goes to show that you never can tell!

The idea for *Aftermath* was born first out of a re-  
[Turn page]

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mark by one of our Members of Parliament. Asked about post-war conditions he said in effect that the aftermath of the war was going to be terrible indeed. Then, immediately afterwards, the super-optimists began their publicity about the glorious world we will have after the war, about the Utopian dream garden it will become, how we will kiss our enemies and create a brotherhood of men. Well, that had me puzzled. Bluntly, I didn't believe it.

Suppose the war took a sudden turn for the worse from the scientific point of view? Suppose some bright scientist on the enemy side found a truly terrible weapon? It could happen—and on this premise I built the idea of Aftermath, imagining the war dragging on through the years, because an enemy scientist had happened to find the way to release the overwhelming might of atomic force.

From that foundation the story developed along the lines of pure logic. This or that would be bound to occur, and so gradually I found myself with an interesting problem on my hands.

To me, as always, science fiction is still not appreciated with the deep interest it deserves, but I certainly think that it will be when this war is over. The world will have had such a waking up, such a cooperation with giant machines and scientific instruments, that the very best we poor writers can do will seem footling, no doubt.

If this does happen, all right, for it will establish our favorite literature where it ought to be in the very front rank. If it lacks anything it is humanity, but even this can be achieved—in fact has been achieved, to mention the late Stanley Weinbaum's unforgettable characters as only one example.

I hope, then, that in Aftermath I have given something new, and I will now retire to don my battle dress and await the brickbats.

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